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CONTENTS

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Volume 54

Number 2

Behavioral Criteria for Grounding Entrepreneurship Education and Training Programs: A Validation Study <i>by Travor C. Brown and Dennis Hanlon</i>	399
Beyond the Formal–Informal Dichotomy of Small Firm Strategy-Making in Stable and Dynamic Environments <i>by Martie-Louise Verreynne, Denny Meyer, and Peter Liesch</i>	420
The Impact of Social Networks on Perceptions of International Opportunities <i>by Witold Nowiński and Alex Rialp</i>	445
Entrepreneurial Orientation and International Performance: The Moderating Effect of Decision-Making Rationality <i>by Ioanna Deligianni, Pavlos Dimitratos, Andreas Petrou, and Yair Abaroni</i>	462
Two Decades of Sustainability Management Tools for SMEs: How Far Have We Come? <i>by Matthew P. Johnson and Stefan Schaltegger</i>	481
How Firm Strategies Impact Size of Partner-Based Retail Networks: Evidence From Franchising <i>by Manish Kacker, Rajiv P. Dant, Jamie Emerson, and Anne T. Coughlan</i>	506
Entrepreneurial Orientation and Service Innovation on Consumer Response: A B&B Case <i>by Edward Shib-Tse Wang and Pei-Yi Juan</i>	532
Motivations and Opportunity Recognition of Social Entrepreneurs <i>by Ronit Yitsbaki and Fredric Kropp</i>	546
The Effect of Customer Orientation on Smaller Sized Service Firms and on the Market: A Multilevel Application Embracing Firms and Customers <i>by Ana Isabel Polo Peña, Dolores María Frías Jamilena, and Miguel Ángel Rodríguez Molina</i>	566
Unpacking Coordination Benefits in Supply Networks: Findings from Manufacturing SMEs <i>by Irene Petrick, Carleen Maitland, and Nicolai Pogrebnyakov</i>	582
Family Control, International Accounting Standards, and Access to Foreign Banks: Evidence from International Entrepreneurial Firms <i>by Qiu Chen, Shujun Ding, Zhenyu Wu, and Fan Yang</i>	598

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Entrepreneurship and Family Firm Research: A Bibliometric Analysis of An Emerging Field <i>by M^a Concepción López-Fernández, Ana M^a Serrano-Bedia, and Marta Pérez-Pérez</i>	622
Family Business Characteristics and the Approach to HRM in Overseas Ventures <i>by Mariasole Bannò and Francesca Sgobbi</i>	640
The Positive Effect of Motivation and International Orientation on SME Growth <i>by Øystein Moen, Alf Gunnar Heggseth, and Ola Lome</i>	659
What Does Really Matter in the Internationalization of Small and Medium-Sized Family Businesses? <i>by Andrea Calabrò, Marina Brogi, and Mariateresa Torchia</i>	679
Firm Growth in Family Businesses—The Role of Entrepreneurial Orientation and the Entrepreneurial Activity <i>by Pekka Stenholm, Tommi Pukkinen, and Jarna Heinonen</i>	697
Unexpected Succession: When Children Return to Take Over the Family Business <i>by Marie-Christine Chalus-Sauvannet, Bérange Deschamps, and Luis Cisneros</i>	714
Cultural Convergence in Emerging Markets: The Case of McDonald's in China and India <i>by Hyo Jin (Jean) Jeon, Brinja Meiseberg, Rajiv P. Dant, and Marko Grünhagen</i>	732
The Differential Effect of Development Speed and Launching Speed on New Product Performance: An Analysis in SMEs <i>by Maria Moreno-Moya and Jose-Luis Munuera-Aleman</i>	750
Export Commitment and the Global Financial Crisis: Perspectives from the New Zealand Wine Industry <i>by Yang Yu and Val Lindsay</i>	771

Behavioral Criteria for Grounding Entrepreneurship Education and Training Programs: A Validation Study*

by *Travor C. Brown and Dennis Hanlon*

The entrepreneurship literature lacks a systematically developed and validated framework to ground educational programs. We previously developed behavioral observation scales (BOS) consisting of 9 dimensions and 47 behaviors. In this study, we validated the BOS using 12 performance measures and a national survey of 149 entrepreneurs. The BOS were found to be valid. All 9 BOS dimensions, as well as the total score on the BOS, correlated significantly with many of the 12 nonbehavioral performance measures. These BOS provide entrepreneurship education and educators with a validated and systematically developed instrument that can be used to appropriately ground education programs.

Introduction

New firms contribute disproportionately to innovation, productivity growth, and job creation, but few people in innovation-based economies feel they possess the capabilities to pursue an opportunity (Amorós and Bosma 2013). Higher education and a wide range of economic support agencies have responded with a proliferation of entrepreneurship programs aimed at increasing the supply of entrepreneurs and/or their probability of success. Though the impressive growth and progress of entrepreneurship education are well documented (Béchar and Grégoire 2005; Katz 2003; Kuratko 2005; Solomon, Duffy, and

Tarabishy 2002), there is still no accepted paradigm for teaching entrepreneurship (Fiet 2000; Solomon, Fernald, and Dennis 2003), leading Rideout and Gray to observe: “E-ed appears to be one of those phenomena where action and intervention have raced far ahead of the theory and pedagogy and research needed to justify and explain it” (Rideout and Gray 2013, p. 346).

Research on entrepreneurship education and training has failed to provide much evidence that we are actually teaching the skills most important to future entrepreneurs (Edelman, Manolova, and Brush 2008) or that help create more or better entrepreneurs (Martin, McNally, and Kay 2013). With few empirical findings available to support entrepreneurship

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education design (Honig 2004), most of the linkages between entrepreneurship education and the real world remain underspecified (Vanevenhoven 2013), leaving researchers and educators far too frequently relying on a “taken for granted” position (Fayolle 2013, p. 692). Unfortunately, a “taken-for-granted” strategy is also a risky strategy. In the case of business education, for example, a recent study by Rubin and Dierdorff (2007) found that the managerial competencies considered most critical were least represented in MBA curricula.

At the heart of much of the controversy is a concern for relevance. In some cases, approaches to entrepreneurship education have failed to keep up with the rapidly changing environment (Neck and Greene 2011). In other cases, programs may lack personal relevance and fail to translate to the reality of the workplace (Kwong, Thompson, and Cheung 2012). In another study, Edelman, Manolova, and Brush (2008) found a discrepancy of over 40 percent between the start-up activities typically present in entrepreneurship textbooks and the activities practiced by nascent entrepreneurs.

The purpose of this paper addresses the concern that we may not be teaching entrepreneurs what they need to do to be successful. There is a gap between what is taught in entrepreneurship and what entrepreneurs do, and this gap is not being addressed by entrepreneurship education research (Fayolle 2013). Because entrepreneurs play a key role in the success of their firms, understanding what it is that successful entrepreneurs do that differentiates them from less effective entrepreneurs should provide the platform from which effective training and education programs are developed. Our understanding of the effective behaviors of entrepreneurs must be derived from systemically developed and validated frameworks (Edelman, Manolova, and Brush 2008, p. 57). In the present paper, we provide one empirically grounded and validated answer to the question of what should be taught to would-be entrepreneurs. It focuses on “what entrepreneurs need to be able to do,” or what behaviors they must demonstrate, in order to perform effectively.

The layout of our paper is as follows. We begin by discussing the relationship between the entrepreneur and firm performance. We then overview the behavioral observation scales (BOS; Latham and Wexley 1994) method

and a previous pilot study where we used the BOS method to develop an empirically grounded set of behaviors associated with entrepreneurial effectiveness. This is followed by our validation study and the implications of that validation study.

Performance: The Role of the Entrepreneur

The shift from studies of entrepreneurial personalities to studies of behavior had a significant and positive influence on research in the discipline, but one, perhaps unintended, effect was a shift away from individual behavior toward firm-level behavior (Höglund, Lundgren, and Songsong 1999). Subsequently, we have seen revitalized interest in the role and influence of the individual entrepreneur (Bird and Schjoedt 2009; Sarasvathy 2004; Shane and Venkataraman 2000), perhaps because organizations are ultimately created and sustained by the purposeful, intentional behaviors of entrepreneurs (Bird 1988). Clearly, what we teach entrepreneurs is important as they play a critical role in the success (or failure) of the firm. Though important outcomes in all organizations can be linked to their senior managers (Hambrick and Mason 1984), the impact of key individuals should be even greater in new firms given the limited influence of other factors (e.g., external stakeholders, corporate structure, and culture; Bird 1988). Thus, during the early stages of a venture, its primary resource is typically the human capital (experience, knowledge, skills, etc.) embodied in the entrepreneur (Alvarez and Busentiz 2001; Brush, Greene, and Hart 2001; Cooper, Ramacharan, and Schoorman 1998; Haber and Reichel 2007).

The importance of the behaviors performed by entrepreneurs is supported by a variety of work. Even though the management process in new and small firms differs from large, established firms (Mueller, Volery, and von Siemens 2012), entrepreneurs still must fulfill a variety of basic managerial functions (Jennings and Beaver 1997) for their firms to survive and prosper. The behaviors of the entrepreneur across different stages of firm development may overlap because of the presence of a common set of “core” functions (Mueller, Volery, and von Siemens 2012), yet each stage tends to bring its own particular set of management challenges (Solomon, Fernald, and Dennis 2003). As their roles evolve, so too do

the behaviors required of entrepreneurs (Mueller, Volery, and von Siemens 2012). Start-up entrepreneurs, for example, tend to spend less time on “routine” activities and more time on environmental monitoring, with a fairly discernible switch from “doing” to “managing” as the organization evolves (Mueller, Volery, and von Siemens 2012).

In order for a successful transition from one stage to the next to occur, the entrepreneur must recognize that a change in his or her behavior is needed. Entrepreneurs lacking critical competencies, however, may be unable to identify behaviors appropriate for the firm’s circumstances or be unable to execute such behaviors effectively, ultimately leading to firm failure. In the case of young firms, lack of management ability is often cited as a major reason for firm failure, leading banks and lending organizations to emphasize the assessment of the owner/manager when evaluating new business proposals (Martin and Staines 1994). Indeed, the importance placed on the ability of management is the most consistent finding from studies of venture capital fund manager decision-making (Mason and Stark 2004).

The foregoing suggests that entrepreneurship education must include elements related to both management and entrepreneurship.

A summary of comprehensive frameworks aimed at describing the sets of behaviors important to entrepreneurs and small and medium-sized enterprises (SMEs) appears in Table 1. Many of these frameworks were not systematically developed using empirical methods, but were based on literature reviews instead. The table also suggests that the field is disjointed, with little consensus evident. We believe several factors may account for the lack of consensus. First, different study contexts may result in categories being conceptualized at varying levels of abstraction. Second, where frameworks have been compiled from literature reviews, discrepancies may suggest a fragmented literature. Third, methodological differences often make it difficult to compare results across studies. Sampling strategies may have an especially large impact because competency requirements can vary across different stages of firm development. The overall picture that emerges is of a field lacking the empirical rigor needed to ground training and development programs. Such a state of affairs is hardly unique to the entrepreneurship field. For

decades, scholars have bemoaned the faddish tendencies and nonsystemic methods used in management training and education programs (Latham 1988). Fortunately, more recent reviews have shown improved rigor in such programs (Aguinis and Kraiger 2009).

In this paper, we seek to address the gap concerning the lack of systematically developed and validated frameworks available to ground entrepreneurship education programs. We looked at the broader organizational behavior/human resource management (OB/HRM) field to help us bridge this gap for several reasons. First, that discipline often examines issues related to individual performance and development as well as the link between individual performance and organizational effectiveness (Latham et al. 2005). Second, OB/HRM methods could avoid “reinventing the wheel.” Third, applying proven OB/HRM techniques could reveal new insights about which of the myriad of behaviors performed by entrepreneurs are especially critical for firm success. Finally, it answers the call of scholars to borrow techniques from other disciplines, particularly the OB field, to examine entrepreneurial behavior (Bird and Schjoedt 2009).

Performance: Insights from OB/HRM

For more than 40 years, OB/HRM researchers have advocated behavioral measures of performance developed using a systematic job analysis (Arvey and Murphy 1998; Campbell et al. 1970; Smith and Kendall 1963). Behavioral measures of performance describe the specific behaviors a person must perform to effectively perform the task.

BOS, and the items they include, are by definition a behavioral performance measure (Latham and Wexley 1994). The psychometric evidence concerning BOS is impressive. Extensive investigation indicates that BOS are reliable, valid, and legally defensible measures of individual performance (see review in Latham and Wexley 1994). BOS have high levels of inter-rater reliability and correlate with other nonbehavioral measures of performance (Brown and Latham 2006; Latham and Wexley 1977; Taggar and Brown 2001). For example, total BOS score (i.e., summing the frequency ratings across all BOS items) has been shown to correlate with other performance measures (Brown and Latham 2006; Latham and Wexley

Table 1
**Entrepreneurial and SME Management Behavior/
 Competency Frameworks^a**

Study	Construct	Dimensions	Sample/Method	Dependent Variables
Bird, Schjoedt, and Baum (2012)	Exemplar entrepreneur behaviors	26 behaviors, for example: Time spent developing ties Problem solving Organizing Scanning frequency	Literature review of entrepreneurs' behavior research	n/a
Chandler and Hanks (1994)	Founder competencies	Entrepreneurial Managerial	New (≤ 10 years) manufacturing firms $n = 155$ Literature-based dimensions Hierarchical regression	Firm performance
Chandler and Jansen (1992)	Founder competencies	Human/conceptual Opportunity recognition Drive Technical/functional Political	New (mostly) firms in 5 industries $n = 134$ 21 items from literature Factor analysis Canonical discriminant analysis	Firm performance
Gasse and Amboise (1997)	Entrepreneurial–managerial competencies	Vision People management Operations Resources Strategies	SMEs $n = 47$ Literature-based model Qualitative analysis of interview data	Firm performance (growth)
Man et al. (2002, 2008)	Entrepreneurial competencies	Opportunity Relationship Conceptual Organizing Strategic Commitment	Theory development Literature-based 2008 single-industry study ($n = 153$) 68 items Factor analysis Revised to 10 competencies	Firm performance
Mueller et al. (2012)	Entrepreneurs work behavior	7 activities 10 functions	Literature-based	n/a
Orser, Cedzynski, and Thomas (2007)	Owner experience (precursor of competencies)	SME management. General management Fiscal Marketing Technology management Innovation	SMEs $n = 326$ 23 items from literature Structural equation modeling	Firm stage Growth intentions
Rathna and Vijaya (2009)	Competencies of entrepreneurs versus intrapreneurs	Managerial behavior Interpersonal behavior Decisive behavior Ethical behavior Venturing behavior Enterprising behavior Learning orientation	30 entrepreneurs and 30 intrapreneurs 121 items Literature-based Preexisting instrument	Importance Frequency
Sadler-Smith et al. (2003)	Managerial behaviors/competencies	Managing performance Entrepreneurial style Managing process Managing stakeholders Managing culture Managing vision Managing development	SMEs $n = 156$ 34 items from UK MCI senior manager Performance instrument Factor analysis	Entrepreneurial style Firm type (high versus low growth)
Thompson et al. (1996)	Competence domain groups for work performance excellence in top management team members	Overarching Sales and marketing Control Organization Technical innovation Human resources Inputs	SMEs $n = 30$ 36 items from RepGrid interviews Qualitative analysis	Work performance excellence

^an/a, not applicable.

1977; Taggar and Brown 2001). A core element of BOS is the five-point frequency assessment of each behavioral item. Other (non-BOS) methodologies have also assessed behavioral criteria using five-point frequency scales and report similar findings. For example, Latham, Wexley, and Rand (1975) found that behavioral criteria correlated with logger productivity, whereas Atwater et al.'s (2005) study of over 6,000 managers found that peer, subordinate, and self-ratings of leadership skills correlated with the level of a manager's competencies. Overall, evidence indicates that the frequency a person performs a behavior is a valid measure of performance.

BOS are also deemed highly effective for developmental purposes, such as the context of this study (Latham et al. 2005). Because they consist of behavioral items under the control of the individual, they provide users with the most accurate conception of the job (Wiersma, Van Den Berg, and Latham 1995). Users report that compared with other methods, BOS are better for giving feedback, easier to use, and better for setting goals (Wiersma, Van Den Berg, and Latham 1995).

Though a well-developed method, BOS, like all performance appraisal methods, have disadvantages. These include BOS being expensive and time-consuming to develop and that raters can lack the time and ability to assess the frequency of the behaviors (Jackson, Schuler, and Werner 2009). However, given the evidence presented in the OB/HRM field, we believed that the BOS method was a strong candidate for developing a set of entrepreneurial behaviors.

Method

Pilot Study: Developing the BOS

In an earlier study, we developed the BOS in accordance with Latham and Wexley's (1994) guidelines. As the method used was described in detail in that study (Brown and Hanlon 2004), we now present only a brief summary of the five-step procedure employed.

First, subject matter experts (award-winning entrepreneurs) took part in a critical incident job analysis. Critical incidents were based on the subject matter experts' observations of other effective and ineffective entrepreneurs rather than self-reports. In step two, the researchers grouped similar (or identical) critical incidents into a total of 47 behavioral items. These 47 items represented behaviors deemed

critical to effective entrepreneurship. The two researchers then acted as "sorters," clustering these 47 behavioral items into natural groupings or "dimensions." In total, they found nine behavioral criteria (or clusters/dimensions). The third step involved assessing the "fit" of the BOS structure using a second group of subject matter experts (called judges). When we compared the groupings of the step two "sorters" with those of the step three "judges," the model fit was acceptable. Content validity was then examined in step four by setting aside 10 percent of the original critical incidents and examining them to see if they described behaviors not present in the BOS. In our case, no new behaviors were found, suggesting that the BOS had content validity and that no behaviors were overlooked. In the final step, the five-point Likert-type scale used in BOS (1 = almost never; 5 = almost always) was attached to each behavioral item.

The resulting BOS (Table 2) consisted of 47 behavioral items grouped into 9 dimensions: (1) relevant background for chosen business, (2) opportunity identification, (3) dedication to business, (4) mobilizing support and resources from others, (5) strategic business development and growth, (6) financial management, (7) employee management, (8) marketing/customer relations management, and (9) negotiation and risk-taking.

A significant advantage of this scale versus other frameworks and scales (such as the ones presented in Table 1) is that the BOS were created using a systematic and empirically grounded method from the OB/HRM literature. Though we felt that this presented a significant contribution to the field, we believed that it was insufficient to ground entrepreneurial education programs as the BOS had not been fully validated. The need for validation motivated the present study.

The Current Validation Study

In the present study, we retained the original BOS language from our pilot study. As previously noted, BOS use the critical incident technique. The critical incident method is considered sound, and few modifications have been proposed over the past 50 years (Gremler 2004). The fact that behaviors are identified from the respondents' perspective, and in their own words, is considered a strength of the technique (Gremler 2004) and a best practice (Campion et al. 2011). The reliability of behav-

Table 2
Proposed BOS^a

Entrepreneurial (Start-Up)	Managerial (Early Growth)
<p><i>1: Relevant Background for Chosen Business</i> Has relevant education for chosen business Has necessary industry knowledge prior to starting business Possesses general business knowledge</p> <p><i>2: Opportunity Identification</i> Conducts adequate market research prior to business start-up Identifies a suitable market niche that can sustain the business Develops products/services to match market needs</p> <p><i>3: Dedication to Business</i> Devotes long hours to the business Is physically present and assumes responsibility for day-to-day management of the business Demonstrates a conviction that the business will succeed Perseveres in spite of business setbacks Motivates himself or herself Does whatever it takes to get the job done</p> <p><i>4: Mobilizing Support and Resources from Others</i> Is honest in his dealing with key stakeholders Establishes credibility at upstart of the business Acquires sufficient capital prior to business start-up Takes advice from others Seeks advice from experts Acquires people with the competencies needed for the business Covers off his or her weaknesses by acquiring people with complementary skill sets Builds relationships to facilitate business venture Acquires the necessary equipment to produce a quality product/service</p> <p><i>9: Negotiation and Risk-Taking</i> Ability to negotiate deal closure Takes calculated risks when appropriate business opportunity arises</p>	<p><i>5: Strategic Business Development and Growth</i> Starts small and gradually grows the business Expands the business by identifying new markets for products/services Sets goals for the business Avoids overreliance on one or two customers Maintains decision-making control of the business Has a clear vision of where the business is going Remains focused on core business Keeps focused on key business priorities Readily adapts to changing environment</p> <p><i>6: Financial Management Skills</i> Demonstrates the financial skills needed to effectively run the business Regularly keeps track of the business's financial position Maintains low levels of overhead Does not spend excessive amounts on luxury or personal items Maintains a debt level that the business can manage</p> <p><i>7: Employee Management</i> Treats employees fairly Communicates regularly with employees</p> <p><i>8: Marketing/Customer Relations Management</i> Builds effective relationships with customers Proactively and aggressively sells products/services Meets customer's expectations Delivers exemplary service by exceeding customer expectations Ensures a high-quality product/service Adapts services/products to changing market needs Advertises and promotes products/services Develops an effective marketing plan</p>

^aBOS, behavioral observation scales.

ioral criteria, as well as the validity of the incidents and the dimensions, is improved if the writing is in the jargon of the job (Atkin and Conlon 1978). Thus, it is not surprising that we found no evidence of respondents having difficulties with item wording. In the absence of evidence to the contrary, we use the BOS verbatim; we did not tamper with a strength of the method.¹

As we prepared to conduct the validation study, we noted that some of the nine BOS dimensions applied to the entrepreneurial domain (e.g., the start-up phase), whereas others were more traditional managerial functions (e.g., early-growth phase; see Table 2). As shown by our pilot study, having different people group behavioral items to behavioral dimensions (and checking for agreement across the different individuals or groups) is a well-accepted method of aggregating behaviors. We thus used the Q-sort procedure (Brown 1980) to classify each BOS dimension as representing the start-up stage or early-growth stage of a venture (respondents were forced to choose; ties were not permitted). Five subject matter experts (all university entrepreneurship instructors) sorted the dimensions according to the venture's stage of development. Five dimensions (*relevant background for chosen business, opportunity identification, dedication to business, mobilizing support and resources from others, and negotiation and risk-taking*) were associated with the start-up stage and four dimensions (*strategic business development and growth, financial management, employee management, and marketing/customer relations management*) were classified as early growth, with 95 percent overall agreement among raters.

The BOS validation method is described by Latham and Wexley (1994). Fit is assessed by a statistical item analysis to determine whether any behavioral items should be removed from a BOS dimension. Criterion validity of BOS has been assessed by examining correlations

between BOS (a behavioral measure of performance) and nonbehavioral performance measures (e.g., amount of wood cut for loggers, Latham and Wexley 1977; student academic performance, Brown and Latham 2006; Taggar and Brown 2001). In the present study, we validated the BOS derived from the pilot study by: (1) assessing the underlying structure of the BOS using item analysis, (2) examining the criterion validity of the BOS in terms of the correlation between BOS and nonbehavioral measures of performance, and (3) using these results to determine if changes were needed in the BOS.

Sample

The sampling frame consisted of firms incorporated during a single month in Canada. A focus on companies enhanced the reliability of the study because incorporated entities must register with government, whose databases are comprehensive and inclusive. We solicited the cooperation of company registries in all 10 provinces and 2 territories. All but one province agreed to cooperate.

Additional restrictions were imposed to ensure the appropriateness of participating firms. First, we excluded preexisting, out-of-province firms (i.e., those merely seeking to register in another geographic territory). We also excluded holding companies because our interest was in operating companies. Finally, we excluded not-for-profit entities because many of the firm performance measures we used are less relevant to them. After these restrictions, the sampling frame consisted of 7,210 firms.

Procedure

We sent mail-out surveys to a random sample (stratified by province) of 4,781 firms six years following their incorporation. Thus, most firms had completed five fiscal years of operations since their inception. We chose this timeframe because we were interested in

¹Results of the frequency analysis reported later in the paper confirm that respondents were able to differentiate between behavioral frequencies. A subsequent study ($n = 38$) requesting small business owners to assist with fine-tuning the properties of the BOS instrument included two questions explicitly asking for the identification of any items "confusing or difficult to interpret." Only one item was cited by more than one respondent. Results indicated the negative wording associated with the financial item "Does not spend excessive amounts on luxury or personal items" may be potentially confusing, as two of three respondents citing this item noted "*double negative*" even though the wording was technically correct. Overall, there was strong support for the meaningfulness of all items.

identifying the key behaviors needed to build a robust, durable business (as opposed to achieving a launch only). Firms less than six (Ireland and Webb 2007) to eight (Bamford, Dean, and Douglas 2004) years old can be regarded as “new,” and five years is an adequate time period to evaluate change and performance in new and small firms (Bracker and Pearson 1986; Hofer and Bygrave 1992).

Surveys were available in English and French. A reminder card was sent after two weeks. We searched the web to locate firms whose surveys were returned because of a wrong address; any firms we located received a follow-up telephone solicitation and a re-mailing of the survey.

Screening questions at the beginning of the questionnaire verified eligibility. Not-for-profits and firms in existence more than six months prior to incorporation were excluded. Excluding preexisting firms restricted the sample to new firms and contributed to the likelihood that firms in the sample faced a similar set of economic conditions during their history.

Additional conditions ensured the appropriateness of the survey respondent. First, the instructions indicated the survey should be completed by the person responsible for making the firm’s key decisions. A subsequent question served as a check, asking respondents to indicate who was responsible for key decisions. Second, respondents had to have founded the firm individually or as a member of the founding team. Third, only respondents who held ownership in the firm at the time of founding were asked to complete the survey.

Measures

Behavioral Measures. The 47-item BOS presented our behavioral measures. As we did not want to bias respondents to the proposed nine-dimension structure, BOS items were presented randomly. Per the BOS procedure, respondents were asked to indicate the frequency (on a scale of 1 = almost never to 5 = almost always) they performed each behavior.

The use of self-BOS ratings was guided by past research and our study context, as using outside observers to rate the behaviors of entrepreneurs was not feasible. Ratings from supervisors or peers have been used in other studies (e.g., Atwater et al. 2005; Brown and Latham 2000) because the critical behaviors are generally performed in a workplace where they can be readily observed by others. In the case of

entrepreneurs, however, observers may not have sufficient opportunity to view the full scope of relevant behaviors. The problem is compounded by the fact that some behaviors could be expected to occur during prestart-up, before substantive engagement with employees and others. Moreover, some critical behaviors may occur in relative privacy, in the absence of any outside observer whatsoever.

Evidence indicates that self-ratings of behavioral performance correlate with ratings from outside observers (Atwater et al. 2005). Moreover, we incorporated factors to minimize the problems associated with self-reports. First, the frequency-based BOS items were nonevaluative and nonsensitive and therefore less prone to social desirability and other self-serving biases. Second, we specifically asked respondents to rate themselves from the perspective of a trusted advisor. Research confirms that this latter strategy minimizes social desirability bias (Schoorman and Mayer 2008).

Note that we, in a subsequent study using these BOS, asked small business owners ($n = 38$) to assist with fine-tuning the instrument. At that time, we also administered the Marlow–Crowne Social Desirability Scale (SDS) (short form; Strahan and Gerbasi 1972). Following Tzinger et al. (1996), we employed two criteria for detecting problematic items: (1) an item-total correlation of at least 0.55 and (2) a lack of significant correlation of the items with the SDS. We found no evidence of social desirability effects; item correlations ranged from -0.26 to 0.24 (mean 0.01), and none of the item correlations with the SDS were significant ($p > .10$). Overall, the precautions used (and the evidence provided) suggest that social desirability bias is not present.

Performance Criteria. BOS validation requires that BOS be validated against nonbehavioral performance measures. As business founder performance should be measured by the firm performance (Chandler and Hanks 1994; Schein 1987), we used 12 nonbehavioral measures of business performance. These 12 measures were grouped into four categories: start-up success, financial performance, operational performance, and a weighted average index.

Start-up success was measured by two variables: *number of employees in year 1* and *sales year 1*. The use of temporally proximate performance measures (Bamford, Dean, and Douglas 2004) helped to ensure the impact of

early behaviors would be detected in the event that some of the behaviors became less important over time.

The remaining 10 measures assessed financial and operational domains, providing a more complete picture of overall business performance (Venkatraman and Ramanujam 1986). With respect to financial outcomes, three variables assessed growth (*employee growth*, *objective sales growth*, and *subjective sales growth*) and three measured profitability/cash flow (*profit*, *cash flow*, and *personal income*). These variables were chosen because growth and profitability are the two most frequently investigated dimensions of financial performance (Carton and Hofer 2006).

Three criterion variables (*product/service quality*, *employee satisfaction*, and *customer satisfaction*) measured operational performance. Operational measures are especially useful in conjunction with financial performance measures “when they provide information about opportunities that have been created, but not yet financially realized” (Carton and Hofer 2006, p. 42). Measures of operational performance can also help to circumvent the “black box” problem by revealing key operational success factors that might lead to financial performance (Venkatraman and Ramanujam 1986).

Of the 12 performance measures, 4 were objective and 8 were subjective. The four objective measures were *number of employees in year 1*, *employee growth*, *sales year 1*, and *sales growth*. The total number of employees in a firm was calculated by converting the four job categories on the survey to full-time job equivalents: 1 point per permanent full-time position, 0.50 points per permanent part-time position, 0.50 points per contractual full-time position, and 0.25 points per contractual part-time position. Employee growth was measured as the increase in the number of employees (permanent full-time, permanent part-time, contractual full-time, contractual part-time) from the firm’s first fiscal year to the most recent fiscal year; for most firms in our sample, this covered the first five years of operations. The number of

full-time employees was used to control for initial firm size. In order to normalize the distribution, a logarithmic transformation was used. Year 1 sales revenue was measured by six categories (1 = <\$100k; 2 = \$100k–249k; 3 = \$250–499k; 4 = \$500k–999k; 5 = \$1M–5M; 6 = >\$5M). For sales growth, participants indicated which of the seven categories best presented their sales growth over the past five years (0 = not applicable; 1 = <5 percent; 2 = between 5 and 9 percent; 3 = between 10 and 19 percent; 4 = between 20 and 34 percent; 5 = between 35 and 50 percent; 6 = >50 percent).²

The eight subjective indicators of performance took into account the differing goals of entrepreneurs (Downey and Ireland 1988). Subjective measures assessed respondents’ satisfaction with a performance dimension because satisfaction with performance has been shown to have a high disclosure rate, strong internal consistency, and relatively strong interrater reliability (Chandler and Hanks 1993). The subjective indicators, most of which were adapted from Gupta and Govindarajan (1982), included *sales growth*, *net profit*, *product/service quality*, *cash flow*, *employee satisfaction*, *customer satisfaction*, and *personal income*. We assessed each using a seven-point Likert-type scale (1 = not satisfied, 7 = extremely satisfied). We specifically varied the response scale here as changing response categories has been argued to reduce survey fatigue (Kervin 1992).

The eighth subjective measure consisted of a weighted index of overall subjective performance. Entrepreneurs rated the importance of each subjective performance dimension (on a scale of 1 = no importance to 5 = extremely important). Using the data on dimensional importance as weights, a weighted-average subjective performance index was constructed for each firm.

Owners of privately held firms are the sole gatekeepers of performance information (Dess and Robinson 1984). Consequently, our performance criteria were based on self-report data, which other research has shown to possess

²We provided an “n/a” category to avoid having to use negative labels like “loss” or “decline.” Our coding rule here was to treat an “n/a” response as missing data unless we were able to verify that the firm also experienced zero or negative employee growth; in the latter instances, we coded the response as “0.” All instances of “n/a” turned out to warrant a coding of 0. We were unable to identify any plausible alternate interpretations of an “n/a” response.

good accuracy and reliability for both recent and past years (Brush and Vanderwerf 1992; Chandler and Hanks 1993).

Results

Sample Composition

We received 329 completed surveys. According to Baldwin et al.'s (2000) seminal work on survival rates for young Canadian firms, only 31 percent of the surveyed firms would be expected to be in existence at the time of the survey. Thus, we estimate that only 1,482 of the firms to which we mailed surveys were still in existence; the 329 surveys returned represent 22 percent of our estimate of "available" firms.^{3,4} Given that response rates of 11–12 percent are not unusual for large-scale mail surveys of existing SMEs (c.f. Julien and Ramangalahy 2003; Westhead, Ucbasaran, and Wright 2005), the response rate appears acceptable. Of the 329 completed surveys, 134 firms were eliminated by the screening questions (i.e., preexisting firms, nonprofit entities). Imposing the additional constraints guiding the eligibility of individual respondents (responsible for key decisions, founder/member of founding team, ownership at the time of start-up) reduced the final sample to 149 surveys.

Among qualifying firms ($n = 149$), the mean firm size was 8.02 employees. On average, respondents (and their spouses) owned 83.3 percent of the firm at the time of start-up and the majority (66.9 percent) had completed a postsecondary education program. Females comprised 17.8 percent of the respondents whereas 82.2 percent were male. Firms were distributed across all industry categories, with the largest frequencies observed in "other" (e.g., consulting, film, software development, etc., 27.2 percent), business services (21.1 percent), and construction (14.3 percent) categories.

Because reliable data concerning the demographics of firms incorporated during the period of interest do not exist, few tests for sample bias were possible. We did run two

such tests. The first test examined nonresponse bias by geographic region (east, central, west) and was not significant. A second test considered the potential for performance differences in nonrespondents. It is plausible that entrepreneurs less likely to respond would be those who are too busy trying to either survive or keep up with the growth of their businesses. We assessed the potential for response bias by comparing early and late responders (c.f. Armstrong and Overton 1977; Dean, Shook, and Payne 2007). The first and last third of the respondents were compared using *t*-tests on each of the 12 performance measures. No significant differences were found.

BOS Analysis

The BOS analysis consisted of several steps. First, we ran frequencies on all 47 items. This was done as some BOS items may be critical for effective performance yet be performed so frequently (or infrequently) that they fail to differentiate effective from ineffective performance (Latham and Wexley 1994). Latham and Wexley (1994) give an example of when over 90 percent of ratees received the same score on the five-point scale and only two of the five-scale points were used, as evidence of insufficient variation. In our study, only three items had distributions where the frequency on any one-scale point was more than 65 percent (namely, 65.8 percent, 70.5 percent, and 82.8 percent) and all but one had responses for all points on the five-point frequency scale (the exception had responses on four-scale points). Thus, all BOS items demonstrated adequate variation and "passed" Latham and Wexley's variance test.

Second, following Latham and Wexley (1994), we assessed the BOS structure by treating each BOS dimension as a scale and examining the internal consistency (or reliability) of each dimension using item analysis.⁵

Correlations between single items and total scale scores of 0.30 are typically considered "good" (Nunnally 1978). Our analysis of the

³We also examined the surveys returned by Canada Post. In total, 1,134 surveys were returned to us. Of that number, we were able to find contact information for 169 (14.9 percent) in order to resend the survey. This suggests that as few as 14.9 percent of the companies for whom surveys were returned were still in business.

⁴When applying an eligibility requirement (i.e., "surviving" firms), one first must estimate the number of eligibles among the nonrespondents (Wiseman and Billington 1984).

⁵A factor analysis can also be used to assess the fit of BOS items to BOS dimensions when there are "three to five times as many individuals to be rated as there are behavioral items" (Latham and Wexley 1994, p. 90). Our data barely met this ratio. As argued by the creators of the BOS method (Latham and Wexley 1994), the

corrected item-total score correlation results found that all items in dimensions 1, 2, 7, 8, and 9 demonstrated correlations greater than, or equal to, 0.30. For the remaining scales, one item on Dimension 3 had a correlation of 0.28. Removing that item would increase the dimension's reliability, as measured by Cronbach's alpha, only marginally, from 0.69 to 0.70. On Dimension 4, two items had correlations below 0.30 (e.g., 0.28 and 0.26); however, the overall scale (including these two items) demonstrated a Cronbach's alpha of 0.77. For Dimension 5, one item had a correlation of less than 0.30; however, the overall Cronbach's alpha for the scale was 0.79. Finally, Dimension 6 had two items with correlations less than 0.30 (both 0.28). However, removing these items did not increase the Cronbach's alpha to the desired level of 0.70. Considered together, the results were fairly strong, but less than ideal. This is not totally surprising given that independent criteria may be ideal for statistical purposes but unlikely for judgments of human behavior (Latham and Wexley 1994). In sum, of the correlations below the 0.30 threshold of "good," most were marginally below the threshold.

We subsequently summed the behavioral items associated with each BOS dimension. Table 3 shows the mean, standard deviation, and Cronbach's alpha for each BOS dimension and their summation (i.e., total BOS score). Most dimensions had Cronbach's alphas at, or near, the 0.70 level. Notable exceptions were Dimensions 6 (financial management) and 9 (negotiation and risk-taking), where the alphas were below the 0.60 level. Dimension 9's alpha may have been low because Cronbach's alpha can be sensitive to very small (e.g., two-item) scales (Hulin and Cudeck 2001). Per Hulin and Cudeck's recommendation, we ran a Spearman-Brown split reliability analysis on both two-item scales and the reliability coefficients were not significantly better (0.57 and 0.59 for dimensions 7 and 9, respectively).

Removing items did not improve the scales' reliability to the 0.70 level.

Where item analysis indicates potential weaknesses in the scales, experts on BOS (Latham and Wexley 1994) and achievement tests (Nunnally 1978) indicate that human judgment must play the deciding role as to whether an item is included or rejected. In particular, content validity should be given priority over statistical analysis. Nunnally, for example, states: "item analysis . . . is secondary to content validity . . . with achievement tests considerable pains are taken to ensure all items have content validity before they are submitted to item analysis. Thus all items submitted for analysis are assumed to be good, and the analysis provides additional information only" (1978, p. 264). Because considerable effort was made in our pilot study to ensure content validity, we did not remove or reclassify any BOS items before proceeding to correlational analysis. Overall, these results suggest that the BOS, and its dimensions, demonstrated an acceptable level of internal consistency.

To demonstrate criterion validity, BOS must correlate with nonbehavioral performance measures. Table 3 presents the two-tailed Pearson correlations between BOS dimensions and the 12 (nonbehavioral) performance measures. There were 65 significant correlations between BOS dimensions and performance measures at the 0.05 level and 14 at the 0.10 level. Each dimension correlated with two or more performance measures ($p \leq .05$); the mean number of correlates per BOS dimension was approximately seven. All dimensions but one (negotiation and risk-taking) correlated with five or more performance measures ($p \leq .05$). The total BOS score correlated significantly ($p \leq .05$) with all performance measures but one (employee growth).

In our third step, we set out to fine-tune the BOS structure based on our preceding analyses. When faced with the decision to accept the empirically derived fit of the BOS

main advantage of factor analysis is that "it saves time" (p. 91). Moreover, they assert that factor analysis seeks to ensure that behavioral criteria (or dimensions) are independent of each other, which is unlikely to take place for workplace behaviors given that the criteria are frequently logically related. Thus, many works report Cronbach's alpha coefficients and do not conduct factor analysis on the items contained in BOS (e.g., Brown and Latham 2000, 2006; Morin and Latham 2000; Sue-Chan and Latham 2001). Hence, we only focus on the "human judgment" model in this paper. However, we did conduct a factor analysis. In brief, each of the nine factors had an Eigen value greater than 1.3 and the nine-factor model explained 57.61 percent of the variance in the sample. For full results of the factor analysis, please contact the authors.

Table 3
Correlations: BOS Dimensions and Performance Measures^a

	Performance											
	Start-Up		Growth			Profitability/Cash Flow			Operational			Index
	Employees Year 1 (log)	Sales Year 1	Employee Growth (log)	Sales Growth Objective	Sales Growth Subjective	Profit	Cash Flow	Personal Income	Quality	Employee Satisfaction	Customer Satisfaction	
	M = 0.29	M = 1.96	M = 0.44	M = 3.38	M = 4.30	M = 4.33	M = 4.40	M = 4.33	M = 5.52	M = 5.12	M = 5.82	M = 4.99
	S.D. = 0.43	S.D. = 1.25	S.D. = 0.60	S.D. = 2.10	S.D. = 1.78	S.D. = 1.72	S.D. = 1.70	S.D. = 1.70	S.D. = 1.22	S.D. = 1.30	S.D. = 1.00	S.D. = 1.09
Entrepreneurial (Start-Up)	0.11	0.24**	-0.04	0.14	0.26**	0.23**	0.30***	0.25**	0.22**	0.21*	0.19*	0.26**
Relevant Background for Chosen Business												
<i>Dimension 2</i>	0.21*	0.22**	0.12	0.22**	0.18*	0.14+	0.20*	0.16+	0.20*	0.34***	0.31***	0.22**
Opportunity Identification												
<i>Dimension 3</i>	0.28***	0.18*	0.16	0.20*	0.21***	0.18*	0.24**	0.18*	0.30***	0.33***	0.38***	0.29***
Dedication to Business												
<i>Dimension 4</i>	0.25**	0.21*	0.11	0.24**	0.20*	0.11	0.19*	0.17*	0.11	0.29***	0.26**	0.19*
Mobilizing Support and Resources from Others												
<i>Dimension 9</i>	0.16+	0.15+	0.28*	0.27***	0.12	0.08	0.15+	0.07	0.10	0.14+	0.16+	0.08
Negotiation and Risk-Taking												
<i>Dimension 5</i>	0.20*	0.14+	0.06	0.23**	0.16+	0.13	0.23**	0.16+	0.20*	0.33***	0.30***	0.23**
Strategic Business Development and Growth												
<i>Dimension 6</i>	0.10	0.01	0.03	0.16+	0.14+	0.21**	0.30***	0.12	0.31***	0.31***	0.31***	0.28***
Financial Management												
<i>Dimension 7</i>	0.27**	0.24**	0.11	0.23**	0.13	0.13	0.12	0.15+	0.22**	0.30***	0.10	0.13
Employee Management,												
<i>Dimension 8</i>	0.14	0.19*	0.05	0.21**	0.16+	0.11	0.19*	0.13	0.23**	0.45***	0.41***	0.24**
Marketing/Customer Relations												
Total BOS Score	0.26**	0.23**	0.12	0.28***	0.23**	0.19*	0.28***	0.21*	0.27***	0.41***	0.38***	0.29***

^aBOS, behavioral observation scales; M, mean; S.D., standard deviation. +significant at $p \leq .10$; *significant at $p \leq .05$; **significant at $p \leq .01$; *** significant at $p \leq .001$. Bold numerals highlight significant ($p \leq .05$) correlations.

structure or the qualitative human judgment model, past research has opted for the qualitative model (see Taggar and Brown 2001). In the present case, the Cronbach's alphas for the scales were generally acceptable and we found significant correlations between each of the nine BOS dimensions (as well as the total BOS score) with other nonbehavioral, performance measures. Consequently, we do not suggest that the structure be changed at this time.

That being said, two BOS dimensions may warrant additional investigation. In particular, Dimension 9 (negotiation and risk-taking) was problematic in our pilot study, where it demonstrated the lowest level of agreement between "judges" and "sorters." Dimension 9 had a Cronbach's alpha of 0.59 and demonstrated limited validity in terms of the small number of significant correlations with the performance measures. Nevertheless, this dimension correlated at the 0.10 level with an additional five performance measures. It seems premature to remove this dimension (or these items) as a larger sample could have resulted in these latter correlations being significant.

Similarly, we did not remove Dimension 6 (financial management). Though this dimension had the lowest Cronbach's alpha coefficient (0.55), it correlated with six of the nonbehavioral performance measures ($p \leq .01$). Given the importance of financial management and the apparent face validity that appears to be associated with this dimension, we felt that from a developmental perspective, grouping these items together is important for emphasizing the significance of prudent financial management among new entrepreneurs in education programs.

Correlational Patterns

The correlational evidence provides relatively strong support for the validity of the BOS. On average, each BOS dimension correlated with 7.2 nonbehavioral performance measures; six of the nine BOS dimensions correlated with performance measures in each of the four major performance categories. Seven BOS dimensions correlated with the weighted subjective index of overall performance and the total BOS score correlated with 11 of 12 performance measures.

Seven BOS dimensions correlated with measures of start-up performance, year 1 employee size, and year 1 sales. As expected, there was

more evidence for the importance of entrepreneurial behaviors, but both entrepreneurial (start-up) and managerial (early growth) behaviors emerged as important. All four entrepreneurial dimensions and three managerial dimensions had significant correlations. Of the managerial dimensions, employee management skills appear to have the strongest implications for the firm's early performance as this dimension correlated with both measures of start-up performance. It may be that entrepreneurs with stronger employee management competencies are better able to attract and select appropriate human capital.

Correlational results for the growth-related measures suggest that entrepreneurial behaviors may be a more important predictor of growth than managerial behaviors, although both types of behaviors correlated with performance. Significant correlations were observed on all of the entrepreneurial BOS dimensions and three of the four managerial dimensions (the exception was financial management); however, the entrepreneurial dimensions displayed a noticeably higher proportion of correlations. Overall, only one BOS dimension (negotiation and risk-taking) correlated with employee growth, suggesting that this performance measure possessed limited utility in our sample. Although we applied the log transformation on this variable, we noted in the original raw scores that the median number of employees gained during the period was 0.5 (mean = 3.83, mode = 0). The chance of detecting a relationship with this measure was likely severely constrained by the limited variation present. Interestingly, a comparison of the correlation results for measures of sales growth indicates that the magnitudes of the correlations on seven of the nine BOS dimensions were greater in the case of the objective measures rather than the subjective measures. Subjective measures of performance have been criticized because they can be prone to halo effects. Our results suggest that though halo effects cannot be ruled out, their overall impact in this study is likely minimal.

The last two major categories of performance were profitability/cash flow and operational performance. In the case of profitability/cash flow, correlations were observed on all four entrepreneurial dimensions, with two entrepreneurial dimensions (relevant background for chosen business and dedication to business) especially prominent as they corre-

lated significantly with each performance measure is this category. Three managerial dimensions (strategic business development and growth, financial management, and marketing/customer relations management) correlated with profitability/cash flow, with financial management exhibiting the strongest association. All but one of the BOS dimensions (negotiation and risk-taking) correlated with operational performance. Consistent with the argument that variations in operational performance are often manifest earlier than variations in profitability (Carton and Hofer 2006), the operational performance category displayed the strongest correlational relationship with the BOS behavioral dimensions. Our understanding of entrepreneurship as a process can likely be enhanced by further efforts to develop and select performance measures appropriate for different stages of firm development.

Discussion

Over the course of prestart-up, launch, and the early stage development of a business, entrepreneurs perform a myriad of behaviors. A goal of our study was to identify which behaviors are most important to the early success of the business. Nine behavioral dimensions were identified, all of which could be clearly linked to the performance of the firm. Space limitations preclude the systematic consideration of all of these in sufficient depth; as a compromise we now focus on two representative dimensions: opportunity identification and dedication to business.

Opportunity identification is considered to be one of the most important abilities of successful entrepreneurs (Ardichvili, Cardozo, and Ray 2003) and a potential source of competitive advantage (DeTienne and Chandler 2004). This dimension correlated with all four performance categories, providing strong support for the value of its component behaviors: market research, identifying a niche, and developing products that match market needs. A primary goal of market research is the estimation of market size and preparation of sales forecasts, but it also facilitates segmentation of the market so that limited resources can be strategically employed in a more focused manner to better serve a portion of the market and achieve a competitive advantage. Firms with broader niches may have difficulty developing capabilities providing superior value in any one

area, and also appear more likely to push the boundaries of the firm (exposing themselves to greater risk of failure) when introducing new products (Sorenson et al. 2006).

Given the potential benefits of opportunity identification behaviors, it might be expected that most entrepreneurs would engage in them wholeheartedly. Surprisingly, this is not the case. Marion, Friar, and Simpson (2012), for example, found the new ventures they examined did not use customer or retailer input in developing new products, relying instead on their own design standards. Broader studies of nascent entrepreneurs report similar findings, with fewer than one in four start-ups engaging in activities to define an opportunity by the time they are initiated (Shane 2008). Although opinions differ as to whether opportunities are discovered or created, evidence is accumulating that opportunity identification can indeed be taught (DeTienne and Chandler 2004; Muñoz, Mosey, and Binks 2011) and that certain identification processes may be better suited for different opportunity types. For example, in situations of high uncertainty, experienced entrepreneurs seek alternatives to textbook market research practices (Read et al. 2009). In such situations, it is being argued that innovations in entrepreneurship education including lean methodology (Jones et al. 2013) and the business model perspective (Ehret, Kashyap, and Wirtz 2013) promise to achieve a better fit between new business offerings and market needs by engaging with a variety of stakeholder to “co-create” value.

Dedication appears to be the most important behavioral dimension according to our results. This dimension also correlated with all 4 performance categories, and 11 of 12 possible performance measures (employee growth being the sole exception). Dedication included behaviors such as devoting long hours, being physically present, demonstrating a conviction the business will succeed, persevering in spite of setbacks, etc., all of which reflect the entrepreneur’s commitment. Starting a business is a daunting task (Aldrich 1999). It requires significant effort and is fraught with setbacks. Moreover, research indicates successful entrepreneurs become increasingly busy as their businesses prosper, working up to 12 to 18 hours per day and having little time for activities outside the firm (Baron and Markman 2003). An entrepreneur’s self-efficacy is believed to play an important role in explaining why entre-

preneurs may be willing to display such high levels of effort and commitment (Krueger, Reilly, and Carsrud 2000). Entrepreneurs select tasks and put forth effort based on their expectations, which are heavily influenced by their perception of their own skills and abilities (Gatewood et al. 2002). Self-efficacy is also linked to *perseverance* (Krueger, Reilly, and Carsrud 2000), which is the tendency to persist and endure in the face of adversity (Markman, Baron, and Balkin 2005), and *resilience*, (Bullough, Renko, and Myatt 2014), which is the ability to continue with a purposeful life after hardship and adversity, and thus strongly connected to one's reaction to failure.

Passion has also been suggested as an important construct underlying entrepreneurial involvement, dedication, and persistence (Cardon et al. 2013). According to these authors, passion is at the heart of entrepreneurship and is an affective state stemming from engagement in activities in roles that are meaningful and salient to the self-identify of the entrepreneur. Involvement in the business provides an indication of the entrepreneur's level of effort and reflects the degree to which the work associated with the business is a central life interest of the entrepreneur (Hernández-Maestro and González-Benito 2011). One obvious benefit of involvement is that it can help to keep costs lower than they would be otherwise. A second expected benefit would be tighter control over the implementation of the entrepreneur's vision. Recent research indicates that involvement by the entrepreneur has the ability to enhance the value delivered to the customer, resulting in better firm performance (Hernández-Maestro and González-Benito 2011). Vos and Roulston (2008) found that SME owner involvement was related to financial performance, but not growth; here it was argued that the increased reliance the owner has on the business for both income and wealth produces a strong incentive to ensure the business performs well. Entrepreneurial passion also has the potential to influence firm performance by motivating others, especially employees. Breugst et al. (2012) found empirical support for the proposition that that entrepreneurial passion strengthens the commitment of employees, arguing that passion facilitates the communication of the entrepreneur's vision.

From an education perspective, it appears the greatest potential for education to have an

impact on entrepreneurial dedication is through curricula and programming designed to enhance the entrepreneurial self-efficacy of students. Krueger, Reilly, and Carsrud (2000) contend that we already know how to increase self-efficacy and this claim has empirical support (Wilson, Kickul, and Marlino 2007). Others, however, suggest the situation is far from clear. Wilson, Kickul, and Marlino (2007), for example, argue that designing entrepreneurship education that truly enhances entrepreneurial self-efficacy is a complicated issue and that designing a complete program that can build self-efficacy should be a top priority for entrepreneurship educators.

Importantly for educators, self-efficacy is task and domain specific. The broad-based nature of the behaviors our findings indicate to be critical to the success of entrepreneurs suggests that education and training interventions should be designed at the program level, should be comprehensive in nature, should include curricula that encourage mastery of relevant behaviors through practice (Neck and Greene 2011), and should include systematic evaluation and feedback. We therefore endorse Neck and Greene's (2011) suggested focus on a portfolio of practice-based pedagogies. Activities to support such an approach might include starting a business as coursework, simulations, lean start-up curriculum, providing opportunities to conduct market research for other firms through consultancy-based courses and projects, and apprenticeships.

Overall, our findings provide practical applications for educators and others interested in the question "What do entrepreneurs need to be able to do?" Findings that entrepreneurship textbook content (Edelman, Manolova, and Brush 2008) and education program content (Ojastu, Chiu, and Olsen 2011) are misaligned with what entrepreneurs actually do reinforce the need for education and training programs to be grounded in research and theory (Fayolle 2013; Tannenbaum and Yukl 1992) and to be relevant (Laukannen 2000). These BOS have been subject to an empirical validation involving practicing entrepreneurs, are supported by strong conceptual underpinnings, and provide an empirical foundation for the development (and refinement) of entrepreneurship education and training programs. BOS can also be

used for needs assessment and evaluation of entrepreneurial education programs. When used as the dependent variable, BOS can assess the effectiveness of education/training programs. Alternatively, entrepreneurs (or trainers) may choose to first identify the performance criterion that is most important to them and then develop and improve the BOS dimension that correlates most heavily with that criterion.

Limitations and Future Research

Clearly, our study contains some survivor bias as we were unable to collect data from “ineffective” entrepreneurs whose firms had ceased operations prior to the survey. Consequently, we cannot draw conclusions concerning which BOS dimensions or items differentiate surviving firms from failures. A longitudinal study tracking success versus failure remains important for future research.

Second, we were unable to assess the predictive power of BOS because we gathered BOS ratings and performance outcome measures concurrently. In a future study, it would be helpful to collect performance outcome data after the BOS ratings to see if the BOS ratings indeed predict performance. It bears mention, too, that the cross-sectional nature of our design does not demonstrate the existence of causal relationships and that the results of our study should not be construed to imply that BOS constitute a simple recipe for firm success.

Third, we were unable to calculate a true response rate as we used the contact information from incorporations that were six years old. In future research, cleaning the mailing list prior to sending out the survey would have greatly reduced mailing costs and enable an accurately calculated response rate.

Fourth, a potential reason why entrepreneurs in our sample did not indicate that the behaviors reported under financial capabilities were frequently performed is that they avoided them because of a lack of comfort or confidence with their skill set in this area. Thus, avoidance (or confidence) may be an issue. Bandura (1997) asserted that increasing self-efficacy can reduce avoidance behavior. A meta-analysis by Colquitt, LePine, and Noe (2000) concluded that self-efficacy was a predictor of training motivation and training outcomes; other human resource (HR) scholars

assert that the effectiveness of training and education programs depend upon the extent that they bolster self-efficacy (Saks and Haccoun 2010). Though beyond the scope of this paper, future research should examine the role of self-efficacy. For example, if the present BOS were used to ground an education program, measuring self-efficacy pre and post-training could be used to test the program effectiveness. Training and education studies in the broader HR literature (e.g., Brown and Latham 2000, 2006) that have used BOS and self-efficacy could be used to guide such research.

A fifth limitation of this study is the composition of the sample, which was over 80 percent male. Future research should strive for a more diverse sample.

Conclusion

There is wide acknowledgment of a lack of consistent evidence showing that entrepreneurship education and training creates more or better entrepreneurs (Edelman et al. 2008). This is hardly a trivial concern, yet hardly any research is available to inform entrepreneurship curriculum (Albornoz 2008) and little is known about what entrepreneurs actually do (Bird, Schjoedt, and Baum 2012). In this study, we validated a comprehensive performance instrument (BOS) that contributes to entrepreneurship education and practice in several ways. First, we believe this to be the first study in the literature to validate an empirically derived set of behaviors for entrepreneurship. Second, the study employs a broad-based multi-industry sample to test the generalizability of the new venture behaviors identified as critical. Although other frameworks have been tested on samples of comparable industry scope, those samples used existing, rather than new, firms. The identification of behaviors transferable across settings is useful for our educational context and unique in the literature.

References

- Aguinis, H. A., and K. Kraiger (2009). “Benefits of Training and Development for Individuals and Teams, Organizations, and Society,” *Annual Review of Psychology* 60, 451–474.
- Albornoz, C. A. (2008). “Toward a Set of Trainable Content on Entrepreneurship Education: A Review of Entrepreneurship Research

- from an Educational Perspective," *Journal of Technology Management & Innovation* 3(1), 86–98.
- Aldrich, H. (1999). *Organizations Evolving*. Thousand Oaks, CA: Sage.
- Alvarez, S. A., and L. W. Busentiz (2001). "The Entrepreneurship of Resource-Based Theory," *Journal of Management* 27, 755–775.
- Amorós, J. E., and N. Bosma (2013). *Global Entrepreneurship Monitor Global Report* (2013), 1–103.
- Ardichvili, A., R. Cardozo, and S. Ray (2003). "A Theory of Entrepreneurial Opportunity Identification and Development," *Journal of Business Venturing* 18, 105–123.
- Armstrong, J. S., and T. S. Overton (1977). "Estimating Non-Response Bias in Mail Surveys," *Journal of Marketing Research* 14, 396–402.
- Arvey, R. D., and K. R. Murphy (1998). "Performance Evaluation in Work Settings," *Annual Review of Psychology* 49, 35–59.
- Atkin, R. S., and E. J. Conlon (1978). "Behaviorally Anchored Rating Scales: Some Theoretical Issues," *Academy of Management Review* 3, 119–128.
- Atwater, L., D. Waldman, C. Ostroff, C. Robie, and K. M. Johnson (2005). "Self-Other Agreement: Comparing its Relationship with Performance in the U.S. and Europe," *International Journal of Selection and Assessment* 13, 25–40.
- Brown, T.C., and D. Hanlon (2004). "Developing Behavioural Observation Scales to Foster Effective Entrepreneurship," *Journal of Small Business and Entrepreneurship*, 17, 103–116.
- Baldwin, J., L. Bian, R. Dupuy, and G. Gellatly (2000). "Failure Rates for New Canadian Firms: New Perspectives on Entry and Exit," *Statistics Canada Report No. 61-526-XPE, Ottawa*.
- Bamford, C. E., T. J. Dean, and T. J. Douglas (2004). "The Temporal Nature of Growth Determinants in New Bank Foundings: Implications for New Venture Research Design," *Journal of Business Venturing* 19, 899–919.
- Bandura, A. (1997). *Self-Efficacy: The Exercise of Control*. New York: W.H. Freeman & Company.
- Baron, R. A., and G. D. Markman (2003). "Beyond Social Capital: The Role of Entrepreneurs' Social Competence in their Financial Success," *Journal of Business Venturing* 18, 41–60.
- Béchar, J., and D. Grégoire (2005). "Entrepreneurship Education Research Revisited: The Case of Higher Education," *Academy of Management Learning & Education* 4, 22–43.
- Bird, B., and L. Schjoedt (2009). "Entrepreneurial Behavior, Its Nature, Scope, Recent Research, and Agenda for Future Research," in *Understanding the Entrepreneurial Mind*. Eds. A. L. Carsrud and M. Brannback. New York: Springer, 327–358.
- Bird, B., L. Schjoedt, and J. R. Baum (2012). "Entrepreneurs' Behavior: Elucidation and Measurement," *Entrepreneurship Theory & Practice* 36(5), 889–913.
- Bird, B. J. (1988). "Implementing Entrepreneurial Ideas: The Case for Intention," *Academy of Management Review* 13, 442–453.
- Bracker, J. S., and J. N. Pearson (1986). "Planning and Financial Performance of Small Mature Firms," *Strategic Management Journal* 7, 503–522.
- Breugst, N., A. Domurath, H. Patzelt, and A. Klaukien (2012). "Perceptions of Entrepreneurial Passion and Employees' Commitment to Entrepreneurial Ventures," *Entrepreneurship Theory & Practice* 36, 171–192.
- Brown, S. R. (1980). *Political Subjectivity: Applications of Q Methodology*. New Haven, CT: Yale University Press.
- Brown, T. C., and G. P. Latham (2000). "The Effects of Goal Setting and Self-Instruction Training on the Performance of Union Employees," *Relations Industrielles/Industrial Relations* 55, 80–94.
- (2006). "The Effect of Training in Verbal Self-Guidance on Performance Effectiveness in a MBA Program," *Canadian Journal of Behavioral Science* 38(1), 1–11.
- Brush, C. G., and P. A. Vanderwerf (1992). "A Comparison of Methods and Sources for Obtaining Estimates of New Venture Performance," *Journal of Business Venturing* 7, 157–170.
- Brush, C. G., P. G. Greene, and M. M. Hart (2001). "From Initial Idea to Unique Advantage, the Entrepreneurial Challenge of Constructing a Resource Base," *Academy of Management Executive* 15(1), 64–78.
- Bullough, A., M. Renko, and T. Myatt (2014). "Danger Zone Entrepreneurs: The Import-

- tance of Resilience and Self-Efficacy for Entrepreneurial Intentions,” *Entrepreneurship Theory & Practice* 38, 473–499.
- Campbell, J. P., M. D. Dunnette, E. E. Lawler, and K. E. Weick (1970). *Managerial Behavior, Performance, and Effectiveness*. New York: McGraw-Hill.
- Campion, M. A., A. A. Fink, B. J. Ruggeberg, L. Carr, G. M. Phillips, and R. B. Odman (2011). “Doing Competencies Well: Best Practices in Competency Modelling,” *Personnel Psychology* 64, 225–262.
- Cardon, M. S., D. A. Gregoire, C. E. Stevens, and P. C. Patel (2013). “Measuring Entrepreneurial Passion: Conceptual Foundations and Scale Validation,” *Journal of Business Venturing* 28, 373–396.
- Carton, R. B., and C. W. Hofer (2006). *Measuring Organizational Performance: Metrics for Entrepreneurship and Strategic Management Research*. Northampton, MA: Edward Elgar.
- Chandler, G. N., and S. H. Hanks (1993). “Measuring the Performance of Emerging Businesses: A Validation Study,” *Journal of Business Venturing* 8, 391–408.
- (1994). “Founder Competence, the Environment, and Venture Performance,” *Entrepreneurship Theory and Practice* 18, 77–89.
- Chandler, G. N., and E. Jansen (1992). “The Founder’s Self-Assessed Competence and Venture Performance,” *Journal of Business Venturing* 7, 223–236.
- Colquitt, J. A., J. A. LePine, and R. A. Noe (2000). “Toward an Integrative Theory of Training Motivation: A Meta-Analytic Path Analysis of 20 Years of Research,” *Journal of Applied Psychology* 85, 678–707.
- Cooper, A. C., M. Ramacharan, and D. Schoorman (1998). “Time Allocation Patterns of Craftsmen and Administrative Entrepreneurs: Implications for Financial Performance,” *Entrepreneurship Theory and Practice* 22(2), 123–136.
- Dean, M. A., C. L. Shook, and G. T. Payne (2007). “The Past, Present, and Future of Entrepreneurship Research: Data Analytic Trends and Training,” *Entrepreneurship Theory and Practice* 3, 601–618.
- Dess, G. G., and R. B. Robinson (1984). “Measuring Organizational Performance in the Absence of Objective Measures, the Case of the Privately-Held Firm and Conglomerate Business Unit,” *Strategic Management Journal* 5, 265–273.
- DeTienne, D. R., and G. N. Chandler (2004). “Opportunity Identification and Its Role in the Entrepreneurial Classroom: A Pedagogical Approach and Empirical Test,” *Academy of Management Review* 3, 242–257.
- Downey, H. K., and R. D. Ireland (1988). “Strategic Objectives in Policy Research: An Essay on the Dangers of Not Acknowledging Purposeful Behavior,” *Advances in Strategic Management* 5, 263–275.
- Edelman, L. F., T. S. Manolova, and C. G. Brush (2008). “Entrepreneurship Education: Correspondence between Practices of Nascent Entrepreneurs and Textbook Prescriptions for Success,” *Academy of Management Learning & Education* 7(1), 56–70.
- Ehret, M., V. Kashyap, and J. Wirtz (2013). “Business Models: Impact on Business Markets and Opportunities for Marketing Research,” *Industrial Marketing Management* 42, 649–655.
- Fayolle, A. (2013). “Personal Views on the Future of Entrepreneurship Education,” *Entrepreneurship & Regional Development* 25, 692–701.
- Fiet, J. O. (2000). “The Theoretical side of Teaching Entrepreneurship,” *Journal of Business Venturing* 16, 1–24.
- Gasse, Y., and D. Amboise (1997). “Entrepreneurial-Managerial Competencies and Practices of Growing,” *Proceedings of the 14th CCSBE/CCPME Conference, Vancouver*, 137–147.
- Gatewood, E. J., K. G. Shaver, J. B. Powers, and W. B. Gartner (2002). “Entrepreneurial Expectancy, Task Effort, and Performance,” *Entrepreneurship Theory & Practice* 27, 187–206.
- Gremler, D. D. (2004). “The Critical Incident Technique in Service Research,” *Journal of Service Research* 7(1), 65–89.
- Gupta, A. K., and V. Govindarajan (1982). “An Empirical Examination of Linkages between Strategy, Managerial Characteristics, and Performance,” *Proceedings of the Academy of Management, 42nd Annual Meeting*, 31–35.
- Haber, S., and A. Reichel (2007). “The Cumulative Nature of the Entrepreneurial Process: The Contribution of Human Capital, Planning and Environment Resources to Small Venture Performance,” *Journal of Business Venturing* 22, 119–145.
- Hambrick, D. C., and P. A. Mason (1984). “Upper Echelons: The Organization as a

- Reflection of its Top Managers,” *Academy of Management Review* 9, 193–206.
- Hernández-Maestro, R. M., and Ó. González-Benito (2011). “Objective Quality and Business Performance in Service Environments: Moderating Effects of Entrepreneurs’ Knowledge and Involvement,” *The Service Industries Journal* 31, 2321–2354.
- Hofer, C. W., and W. D. Bygrave (1992). “Researching Entrepreneurship,” *Entrepreneurship Theory and Practice* 16(3), 91–100.
- Honig, B. (2004). “Entrepreneurship Education: Toward a Model of Contingency-Based Business Planning,” *Academy of Management Learning and Education* 3, 258–273.
- Höglund, B., M. Lundgren, and R. Songsoong (1999). *The Unit of Analysis in Entrepreneurship Research: A Survey of 130 Articles*. Jönköping, Sweden: The PEG program, Jönköping International Business School.
- Hulin, C. H., and R. Cudeck (2001). “Measurement IIIA: Cronbach’s Alpha on Two-Item Scales,” *Journal of Consumer Psychology* 10, 55–69.
- Ireland, R. D., and J. W. Webb (2007). “A Cross-Disciplinary Exploration of Entrepreneurship Research,” *Journal of Management* 33, 891–927.
- Jackson, S., R. Schuler, and S. Werner (2009). *Managing Human Resources*. Mason, OH: South-Western Cengage Learning.
- Jennings, P., and G. Beaver (1997). “The Performance and Competitive Advantage of Small Firms: A Management Perspective,” *International Small Business Journal* 15(2), 63–75.
- Jones, C., A. Penaluna, H. Matlay, and K. Penaluna (2013). “The Student Business Plan: Useful or Not?,” *Industry & Higher Education* 27(6), 1–8.
- Julien, P., and C. Ramangalahy (2003). “Competitive Strategy and Performance of Exporting SMEs: An Empirical Investigation of the Impact of Their Export Information Search and Competencies,” *Entrepreneurship Theory and Practice* 27, 227–245.
- Katz, J. A. (2003). “The Chronology and Intellectual Trajectory of American Entrepreneurship Education,” *Journal of Business Venturing* 18, 283–300.
- Kervin, J. B. (1992). *Methods for Business Research*. New York: Harper Collins.
- Krueger, N. F., M. D. Reilly, and A. L. Carsrud (2000). “Competing Models of Entrepreneurial Intentions,” *Journal of Business Venturing* 15, 411–432.
- Kuratko, D. F. (2005). “The Emergence of Entrepreneurship Education: Development, Trends, and Challenges,” *Entrepreneurship Theory and Practice* 29, 577–597.
- Kwong, C. Y., P. Thompson, and C. W. M. Cheung (2012). “The Effectiveness of Social Business Plan Competitions in Developing Social and Civic Awareness and Participation,” *Academy of Management Learning & Education* 11, 324–348.
- Latham, G. P. (1988). “Human Resource Training and Development,” *Annual Review of Psychology* 39, 545–582.
- Latham, G. P., and K. N. Wexley (1977). “Behavioral Observation Scales for Performance Appraisal Purposes,” *Personnel Psychology* 30, 255–268.
- (1994). *Increasing Productivity through Performance Appraisal*, 2nd ed. Reading, MA: Addison-Wesley.
- Latham, G. P., K. N. Wexley, and T. M. Rand (1975). “The Relevance of Behavioral Criteria Developed from the Critical Incident Technique,” *Canadian Journal of Behavioral Science* 7, 349–358.
- Latham, G. P., J. Almost, S. Mann, and C. Moore (2005). “New Developments in Performance Management,” *Organizational Dynamics* 34, 77–87.
- Laukannen, M. (2000). “Exploring Alternative Approaches in High-Level Entrepreneurship Education, Creating Micro-Mechanisms for Endogenous Regional Growth,” *Entrepreneurship and Regional Development* 12, 25–47.
- Man, T. W. Y., T. Lau, and K. F. Chan (2002). “The Competitiveness of Small and Medium Enterprises: A Conceptualization with Focus on Entrepreneurial Competencies,” *Journal of Business Venturing* 17, 123–142.
- Man, T. W. Y., T. Lau, and E. Snape (2008). “Entrepreneurial Competencies and the Performance of Small and Medium Enterprises: An Investigation Through a Framework of Competitiveness,” *Journal of Small Business and Entrepreneurship* 21, 257–276.
- Marion, T. J., J. H. Friar, and T. W. Simpson (2012). “New Product Development Practices and Early-Stage Firms: Two In-Depth Case Studies,” *Journal of Product Innovation Management* 29, 639–654.

- Markman, G. D., R. A. Baron, and D. B. Balkin (2005). "Are Perseverance and Self-Efficacy Costless? Assessing Entrepreneurs' Regretful Thinking," *Journal of Organizational Behavior* 26, 1–19.
- Martin, B. C., J. J. McNally, and M. J. Kay (2013). "Examining the Formation of Human Capital in Entrepreneurship: A Meta-analysis of Entrepreneurship Education Outcomes," *Journal of Business Venturing* 28, 211–224.
- Martin, G., and H. Staines (1994). "Managerial Competencies in Small Firms," *Journal of Management Development* 13(7), 23–34.
- Mason, C., and M. Stark (2004). "What do Investors look for in a Business Plan?," *International Small Business Journal* 22, 227–248.
- Morin, L., and G. P. Latham (2000). "The Effect of Mental Practice and Goal Setting as a Transfer of Training Intervention on Supervisors' Self-Efficacy and Communication Skills: An Exploratory Study," *Applied Psychology: An International Review* 49, 566–578.
- Mueller, S., T. Volery, and B. von Siemens (2012). "What Do Entrepreneurs Actually Do? An Observational Study of Entrepreneurs' Everyday Behavior in the Start-Up and Growth Stages," *Entrepreneurship Theory & Practice* 36, 995–1017.
- Muñoz, C. A., S. Mosey, and M. Binks (2011). "Developing Opportunity Identification Capabilities in the Classroom: Visual Evidence for Changing Mental Frames," *Academy of Management Learning & Education* 10, 277–295.
- Neck, H. M., and P. G. Greene (2011). "Entrepreneurship Education: Known Worlds and New Frontiers," *Journal of Small Business Management* 49(1), 55–70.
- Nunnally, J. C. (1978). *Psychometric Theory*. New York: McGraw-Hill.
- Ojastu, D., R. Chiu, and P. I. Olsen (2011). "Cognitive Model of Entrepreneurship and its Reflection in Education," *Journal of Enterprising Culture* 19, 397–434.
- Orser, B., M. Cedzynski, and R. Thomas (2007). "Modeling Owner Experience, Linking Theory and Practice," *Journal of Small Business and Entrepreneurship* 20, 387–408.
- Rathna, K. G., and T. G. Vijaya (2009). "Competencies of Entrepreneurs and Intrapreneurs: A Comparative Study," *South Asian Journal of Management* 16(2), 28–60.
- Read, S., N. Dew, S. D. Sarasvathy, and M. Song (2009). "Marketing Under Uncertainty: The Logic of an Effectual Approach," *Journal of Marketing* 73, 1–18.
- Rideout, E. C., and D. O. Gray (2013). "Does Entrepreneurship Education Really Work? A Review and Methodological Critique of the Empirical Literature on the Effects of University-Based Entrepreneurship Education," *Journal of Small Business Management* 51, 329–351.
- Rubin, R., and E. C. Dierdorff (2007). "How Relevant is the MBA? Assessing the Alignment of MBA Curricula and Managerial Competencies," *Academy of Management Proceedings* 1, 1–6.
- Sadler-Smith, E., Y. Hampson, I. Chaston, and B. Badger (2003). "Managerial Behavior, Entrepreneurial Style, and Small Firm Performance," *Journal of Small Business Management* 41(1), 47–67.
- Saks, A. M., and R. R. Haccoun (2010). *Managing Performance through Training and Development*, 5th ed. Scarborough, ON: Nelson.
- Sarasvathy, S. D. (2004). "Making it Happen: Beyond Theories of the Firm to Theories of Firm Design," *Entrepreneurship Theory and Practice* 28, 519–531.
- Schein, E. H. (1987). "Individuals and Careers," in *Handbook of Organizational Behavior*. Ed. J. Lorsch. Englewood Cliffs, NJ: Prentice Hall, 513–529.
- Schoorman, F. D., and R. C. Mayer (2008). "The Value of Common Perspectives in Self-Reported Appraisals: You Get What You Ask For," *Organizational Research Methods* 11(1), 148–159.
- Shane, S., and S. Venkataraman (2000). "The Promise of Entrepreneurship as a Field of Research," *Academy of Management Review* 25, 217–226.
- Shane, S. A. (2008). *Illusions of Entrepreneurship*. New Haven, CT: Yale University Press.
- Smith, P., and L. M. Kendall (1963). "Retranslation of Expectations: An Approach to the Construction of Unambiguous Anchors for Rating Scales," *Journal of Applied Psychology* 47, 149–155.
- Solomon, G. T., S. Duffy, and A. Tarabishy (2002). "The State of Entrepreneurship Education in the United States," *International Journal of Entrepreneurship Education* 1, 65–86.

- Solomon, G. T., L. W. Fernald, Jr., and W. Dennis (2003). "Self-Identified Management Deficiencies of Entrepreneurs," *The Journal of Private Equity* 7(1), 26–35.
- Sorenson, O., S. McEvily, R. Rongrong, and R. Roy (2006). "Niche Width Revisited: Organizational Scope, Behavior and Performance," *Strategic Management Journal* 27, 915–936.
- Strahan, R., and K. C. Gerbasi (1972). "Short Homogeneous Versions of the Marlow-Crowne Social Desirability Scale," *Journal of Clinical Psychology* 28(2), 191–193.
- Sue-Chan, C., and G. P. Latham (2001). "The Relative Effectiveness of External, Peer, and Self-Coaches," *Applied Psychology: An International Review* 53, 260–278.
- Taggar, S., and T. C. Brown (2001). "Problem-Solving Team Behaviors: Development and Validation of BOS and a Hierarchical Factor Structure," *Small Group Research* 32, 8–726.
- Tannenbaum, S. I., and G. Yukl (1992). "Training and Development in Work Organizations," *Annual Review of Psychology* 43, 399–441.
- Thompson, J. E., R. Stuart, and P. R. Lindsay (1996). "The Competence of Top Team Members: A Framework for Successful Performance," *Journal of Managerial Psychology* 11, 48–66.
- Tzinger, A., G. P. Latham, B. S. Price, and R. Haccoun (1996). "Development and Validation of a Questionnaire for Measuring Perceived Political Considerations in Performance Appraisal," *Journal of Organizational Behavior* 17, 179–190.
- Vanevenhoven, J. (2013). "Advances and Challenges in Entrepreneurship Education," *Journal of Small Business Management* 51(3), 466–470.
- Venkatraman, N., and V. Ramanujam (1986). "Measurement of Performance in Strategy Research: A Comparison of Approaches," *Academy of Management Review* 11, 801–814.
- Vos, E., and C. Roulston (2008). "SME Owner Involvement and Business Performance: Financial Security Rather than Growth," *Small Enterprise Research* 16, 70–84.
- Westhead, P., D. Ucbasaran, and M. Wright (2005). "Decisions, Actions, and Performance: Do Novice, Serial, and Portfolio Entrepreneurs Differ?," *Journal of Small Business Management* 43, 393–417.
- Wiersma, U. J., P. T. Van Den Berg, and G. P. Latham (1995). "Dutch Reactions to Behavioral Observation, Behavioral Expectation, and Trait Scales," *Group and Organization Management* 20, 297–309.
- Wilson, F., J. Kickul, and D. Marlino (2007). "Gender, Entrepreneurial Self-Efficacy, and Entrepreneurial Career Intentions: Implications for Entrepreneurship Education," *Entrepreneurship Theory & Practice* 31, 387–406.
- Wiseman, F., and M. Billington (1984). "Comment on a Standard Definition of Response Rates," *Journal of Marketing Research* 21(3), 336–338.

Beyond the Formal–Informal Dichotomy of Small Firm Strategy-Making in Stable and Dynamic Environments

by *Martie-Louise Verreyne, Denny Meyer, and Peter Liesch*

Strategy-making assists small firms in managing change and uncertainty by developing suitable strategic options. We move beyond the conventional formal–informal dichotomy to show how three informal approaches—internal participation, external participation, and centralized strategy-making—help both entrepreneurial firms and conservative firms to navigate more or less dynamic environments. In an empirical study of 320 small firms, we find that participation during strategy-making relates positively to performance whereas centralization only matters for conservative firms in stable environments. In dynamic environments, better performance in entrepreneurial firms is associated with all three approaches. Our findings highlight the importance of viewing strategy-making in small firms as multifaceted and context specific.

Introduction

In studies of small firms, research on the strategy-making approaches used to gain advantage has focused on the planning–performance relationship. Ambiguous results from this research have been attributed to the inability of small firms to utilize formal approaches (Hutzschenreuter and Kleindienst 2006; Kotey and Slade 2005; Kraus, Harms, and Schwartz 2006). As noted by Schwenk and Shrader (1993, p. 60), “it is not true that past research fails to demonstrate a link between planning and performance, though it is true that the link is somewhat subtle and difficult to detect.” Overall, these findings question the importance of formal strategy-making in small firms.

New perspectives on the approaches used to make strategies have gained acceptance since

the early 1990s (Cummings and Daellenbach 2009; Dess, Lumpkin, and Covin 1997; Hart 1991, 1992; Whittington and Cailluet 2008). Although these authors do not focus on small firms, they do highlight that strategy-making processes can take many forms. This is important to small firms where the argument that they do plan, but that the process itself is informal, has gained increased acceptance (Beaver and Jennings 2000; Covin, Green, and Slevin 2006; Ogunmokun, Shaw, and FitzRoy 1999). In particular, newer developments such as strategy-as-practice suggest that a more inclusive view of who is involved in strategy-making is needed (Jarzabkowski, Balogun, and Seidl 2007; Whittington 2006). Although strategy-making has historically been seen as the domain of owners and managers in small firms, lower level employees can participate in

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strategy-making alongside external stakeholders such as customers, suppliers, consultants, distribution partners, advertising agencies, and law firms; thus creating a strategy community (Hendry and Seidl 2003). This more inclusive view of stakeholder participation reframes strategy-making as a social process consisting of “strategic conversations” (Hendry and Seidl 2003; Miles, Munilla, and Darroch 2006) that occur in a variety of settings such as meetings, workshops, and interactions with market participants and service providers.

This line of enquiry is promising for small firms (Beaver 2002; Verreynne and Meyer 2010) and may be useful in explaining how small firms use strategy-making to gain advantage. We therefore focus on three such informal strategy-making approaches that have been observed in small firms, namely internal participation, external participation, and centralized strategy-making. Centralized approaches, such as simplistic strategy-making (Lumpkin and Dess 2006) are top-down with decision-making in the hands of the owner-manager. With participative approaches, decisions are collaborative to include owner-managers and employees at different organizational levels (internal participation), and/or with external stakeholders (external participation or adaptive strategy-making).

We further argue that these approaches are not universally applicable to all small firms, and that certain internal and external conditions may influence the relative importance of these strategy-making approaches. One such factor is the entrepreneurial orientation (EO) of the firm. An EO consists of the organizational processes, methods, and approaches that firms use to underpin their entrepreneurial behaviors (Lumpkin and Dess 1996). It includes proactive opportunity-seeking behaviors, preparedness to take risks and an inclination to innovate, and has been investigated as a firm-level activity by several authors (Covin and Slevin 1989; Lumpkin and Dess 1996; Moreno and Casillas 2008; Neubaum, Mitchell, and Schminke 2004). An EO can be viewed as falling along a continuum ranging from high (entrepreneurial firms) to low (the so-called conservative firms; see Miller 1982), and the role of EO in strategy and performance has been widely established (e.g., Covin, Green, and Slevin 2006; Wiklund and Shepherd 2003). We build on previous studies by providing a more nuanced approach that

considers how different types of strategy-making may be more useful for firms at different points on the EO continuum.

Further, firms tend to perceive the environments in which they operate as more or less uncertain, ranging from stable to dynamic (Liesch, Welch, and Buckley 2011). Both EO and strategy-making approaches have been studied to determine their relationship with performance, with the dynamism of the environment acting as a moderator. Although the evidence that firms in dynamic environments tend to be more entrepreneurial is overwhelming (e.g., Wiklund and Shepherd 2005), research that studies the effect of environmental dynamism on strategy-making approaches tends to focus more generally on formal versus informal approaches (e.g., Andersen 2004; Priem, Rasheed, and Kotulic 1995). We argue that firms in either stable or dynamic environments will need different approaches to be successful, and that the participative approaches just highlighted help firms to negotiate dynamic environments more successfully.

We therefore ask: How is strategy-making and firm performance in both entrepreneurial firms and in conservative firms related to EO and environmental dynamism? Our survey-based study of strategy-making in 320 New Zealand firms with fewer than 100 employees shows that for environments that are more dynamic, conservative firms are more entrepreneurial, using a combination of internal and external participation as well as centralized strategy-making to achieve higher levels of performance. However, firms that perceive environmental dynamism to be at very high levels are more entrepreneurial. In this situation it seems that informal strategy-making, and centralized strategy-making in particular, is less effective. Our findings therefore suggest that internal and external stakeholders can play different strategy-making roles depending on the levels of external dynamism and EO. The following sections outline our argument about strategy-making and performance in entrepreneurial and conservative firms, operating in stable or dynamic environments. We then present the findings of our empirical study and examine the implications of the findings for strategy-making in small firms.

Strategy-Making

Our argument that a more nuanced investigation of informal strategy-making approaches is needed commences with a review of strategy-

Table 1
Mapping Approaches to Strategy-Making

Approach Citation	Centralized	External Participation	Internal Participation
Andersen (2004)	Strategy imposed by decree and the vision of the CEO		Participation in decisions/distributed decision authority
Ansoff (1987)		Reactive ad hoc Change	Organic Collaborative
Bourgeois and Brodwin (1984)	Commander		
Chaffee (1985)		Adaptive	
Dess, Lumpkin, and Covin (1997)	Simplistic	Adaptive	Participative
Hart (1991, 1992)	Command	Transactive	
Khandwalla (1976/77)		Muddling through	Democratic
Miller and Friesen (1977, 1978, 1984)	Industry expertise	Adaptiveness	
Mintzberg (1973, 1978)		Adaptive	
Mintzberg (1990)		Environmental	Political
Mintzberg and Waters (1985)	Umbrella/Imposed	Process	Consensus
Nutt (1981)	Normative	Behavioral, Adaptive	Group
Shrivastava and Grant (1985)	Managerial autocracy	Adaptive	
Verreynne (2006)	Simplistic	Adaptive	Participative

Source: Adapted from Hart (1992, p. 336).

making typologies used in large and small firm research (see Table 1). Although other types of strategy-making are identified, we found three approaches that seem to be pervasive in small firm research. With few notable exceptions (e.g., Anderson and Atkins 2001; Frese, Van Gelderen, and Ombach 2000; Verreynne 2006), most authors offered just one or two types of strategy-making as characterizing an informal approach. We therefore also reviewed research conducted in large firms (e.g., Dess, Lumpkin, and Covin 1997; Hart 1991) to identify the most ubiquitous informal strategy-making types. In the next section, the three resulting types are elaborated and hypotheses are developed to frame their differential relationships with performance in small firms.

Centralized Strategy-Making in small firms mostly requires the existence of a blueprint for strategy-making and a strong leader who influences all aspects of the decision “based on managerial experience, expectations, and beliefs,” which results in shared “frames of

reference” that are applied to decision-making to influence outcomes (Daniels and Bailey 1999, p. 31). This approach covers aspects such as a narrow focus based on limited constraints and a vision and goals that limit the suite of possible decisions (Dess, Lumpkin, and Covin 1997; Lumpkin and Dess 2006). As such, it is a frame of mind or perspective in which highly successful firms become overconfident in pursuing a single strategic goal, continue to do so, and this overconfidence might ultimately affect the firm negatively (Miller 1993). Too often, it is evidenced by a disappointing range and depth of the use of strategic tools in small firms (Frost 2003), making the use of strategy-making approaches such as external participation unlikely.

The utility of centralized strategy-making to small firms lies in its capacity to provide focus to resource constrained firms. Focusing on a narrow range of competitive actions and strategies with simplified decision-making may reduce complexity and allow small firms to

compete efficiently in a defined market. Successful firms therefore target the things that they do well without distraction from other stakeholders. Furthermore, simplifying strategy-making means that decisions are taken faster, with less influence from politics and requiring fewer coordinating mechanisms (Lieberman-Yaconi, Hooper, and Hutchings 2010). We therefore hypothesize that:

H1a: Centralized strategy-making is positively related to performance in small firms.

The involvement of other parties in strategy-making is well-reported (e.g., Floyd and Wooldridge 1992; Jones and Macpherson 2006; Wooldridge and Floyd 1990), requiring external stakeholders and “managers with differing points of view to provide their inputs to the strategic process” (Bourgeois and Brodwin 1984, p. 248). External and internal views are therefore incorporated. *External participative strategy-making* is viewed as an active engagement of external parties in the direction of the firm. It is an adaptive approach that involves external parties or stakeholders in shaping strategy, either to take advantage of opportunities identified during discussions, or through feedback, to shape decisions. Firms that incorporate external views in their decision-making therefore adapt to the needs or demands of customers or suppliers, for example. Engagement of these parties represents dependence on customers, suppliers, consultants, and other service providers to the firm for inspiration and effect (Barney 1991; Hart 1991). This approach has been labelled as adaptive strategy-making, organic strategy, or incremental strategy (Farjoun 2002; Mintzberg 1973).

Small firms can often be more responsive than larger firms when challenged by rivals (Alpkan, Yilmaz, and Kaya 2007; Chen and Hambrick 1995; Robinson 1982), and they can access and use external sources of information in a timely manner, run ideas past external stakeholders more quickly, and become more responsive to the needs of supply chain partners and customers. It has long been recognized that participation by “outsiders” during strategy-making makes up for the absence of planning departments in small firms, with external stakeholders supplementing skills-shortfalls and providing information not otherwise available (Robinson 1982). Outsiders improve the quality of decision-making, entic-

ing owner-managers to focus on strategy-making away from the demands of day-to-day operational activities. We hypothesize that:

H1b: Centralized strategy-making is negatively related to the use of external participative strategy-making.

Internal participative strategy-making is defined as an approach through which strategies result from the inclusion of various internal (mostly employee) stakeholder views in different stages. This means that more than one individual is actively involved in strategy-making (Covin, Green, and Slevin 2006). The importance of collective sense-making to capitalize on the divergent views of managers is well-established (Eppler and Platts 2009). For this to be successful, basic assumptions that buttress the approach and expectations of stakeholders must be communicated to participants to ensure alignment of strategic purpose and to minimize misunderstandings. There are at least two reasons why internal participation can improve firm performance (Wooldridge and Floyd 1990). First, it enables more accurate information assembly, increased scrutiny of decisions and feedback on formulated plans, with the degree of involvement as well as the role of the participants determining the magnitude of this effect. Second, it can result in higher levels of strategic consensus, greater buy-in, improved implementation and, subsequently, improved performance. Involvement in strategy-making by members within the firm is generally seen as providing firms with strengthened shared vision, higher quality decisions, improved adaptivity, job satisfaction, organizational commitment, and enhanced organizational learning (Brews and Purohit 2007; Nutt 2001; Parnell and Crandall 2001; Tourish 2005). The close physical proximity of members within small firms facilitates internal participation during strategy-making, making it more likely that these firms realize on these advantages. As a result, internal participation can provide solutions to some of the challenges of strategy-making in small firms, broadening the resources to assemble and analyze information and supporting the decision-making efforts of the owner-manager.

Although participation in strategy-making by both internal and external stakeholders is conjectured to have separate positive effects on performance, their combined effect may be

even more beneficial. Applied conjointly, external and internal participation may provide small firms with a greater range of strategic options as well as the best information to screen those opportunities. We argue that external participation may facilitate opportunity recognition, whereas internal participation improves the inclusion of these opportunities in a firm's strategic direction. Therefore, external participation might be expected to influence internal participation, and as such, small firms that are competent at drawing upon both external and internal participation may perform better. Taken together, these arguments lead us to hypothesize that:

H1c: Internal participative strategy-making is positively associated with performance in small firms.

H1d: The association between external participative strategy-making and performance in small firms is mediated by internal participative strategy-making.

Strategy-Making and EO

Entrepreneurial firms are characterized by innovativeness, proactiveness, risk-taking, competitive aggressiveness, and autonomy (Covin and Slevin 1989; Lumpkin and Dess 1996). Conservative firms, in contrast, are defender firms and tend to follow others in the market (Miles and Snow 1978; Miller 1982). This dichotomous view of an entrepreneurial versus conservative firm (Miller 1983) is pervasive in the literature, but when measuring EO, the reality is that it is a continuous construct with entrepreneurial and conservative firms closing the continuum. While EO has also been measured by focusing on its subdimensions, such as innovation or risk-taking (see e.g., Lumpkin and Dess 1996), we follow the approach of Miller (1983) and argue that a firm can be more or less entrepreneurial depending on the level of EO that it exhibits (Green, Covin, and Slevin 2008). Furthermore, Wiklund and Shepherd (2005, p. 74) explain that EO "reflects how a firm operates rather than what it does." This supports the view espoused in this paper that EO is a firm orientation, part of a culture that permeates the firm and determines how it operates. A firm's EO radiates cultural tones and, thus, is bound to directly impact its approach to strategy-making. Recent research has shown that an EO is valuable to

small firms (e.g., Runyan, Droge, and Swinney 2008; Wiklund and Shepherd 2005) in that it helps them to deal with their liability of smallness by building an ability to stay focused on opportunities, harness the creative energies of team members, and recognize how strategic resources need be adapted to shifting opportunities. This is particularly the case in dynamic environments.

Evidence points toward entrepreneurial small firms being more sophisticated decision-makers (Bhide 1994; Gibbons and O'Connor 2005), more inclusive in their strategy-making practices, and more motivated, perceiving that they have greater control over their often turbulent environments (Matthews and Scott 1995). However, effectuation logics argument shows that successful entrepreneurial firms use intuition to make decisions (Sarasvathy 2001), and therefore centralized approaches may also have a place in these firms (Covin, Green, and Slevin 2006).

Nonetheless, centralized strategy-making typically limits opportunity search, a precondition for success in entrepreneurial firms (Lumpkin and Dess 1996), which means that external participative strategy-making is more likely to be used in entrepreneurial firms (Barringer and Bluedorn 1999). Firms that use these approaches are able to adapt their strategy to changing market conditions or to pursue opportunities more quickly (Barringer and Bluedorn 1999). Participative approaches are often employed by small firms because of their dependence on external stakeholders who typically include customers and suppliers. This active engagement of external stakeholders in strategy-making is the key point of difference from the other informal types of strategy-making.

In entrepreneurial firms operating in dynamic environments external participative strategy-making is crucial for the extension of organizational life stages such as growth, and for delaying the onset of unwanted stages such as decline (Ciavarella 2003). Active engagement of external stakeholders in strategy-making often does this by providing the opportunity to gain and/or test ideas with customers, suppliers, and other interested parties. Covin, Green, and Slevin (2006) suggest that market feedback and the retention of strategic flexibility may have a role here. First, market feedback and its incorporation into the strategic decisions of the firm is a central element of adaptive strategy-

making. By including this feedback, the small firm may improve its processes and/or products (Green, Covin, and Slevin 2008). In fact, interaction with stakeholders facilitates the advancement of opportunity recognition by the firm. Such interaction can be viewed as leading to innovation and possibly risk-seeking. Second, external participative strategy-making is by nature flexible, allowing the firm to commit to a project, or abandon or postpone it and to reallocate resources when necessary (Covin, Green, and Slevin 2006).

More formal approaches such as *centralized strategy-making* are viewed as supportive of conservative strategic postures. Repetition of planning blueprints and of set practices for example, is likely to have a negative influence on the development of an EO by allowing no room for opportunity-seeking behavior, experimentation, or flexibility. Entrepreneurial behaviors also demand broad scanning of the environment and a search for opportunities that may satisfy customer demand, and are therefore incongruent with simplistic strategy-making (Lumpkin and Dess 1996). It is therefore expected that the entrepreneurial nature of a firm will facilitate the choice of external participative strategy-making, and that centralized approaches may be more useful for conservative firms. We hypothesize that:

H2a: EO is positively associated with external participative strategy-making.

H2b: The association between centralized strategy-making and small firm performance will be moderated by EO, in that centralized strategy-making will be positively associated with performance only in conservative firms.

H2c: The association between participative strategy-making and small firm performance will be moderated by EO, in that participative strategy-making will be positively associated with performance only in entrepreneurial firms.

Strategy-Making and Dynamic Environments

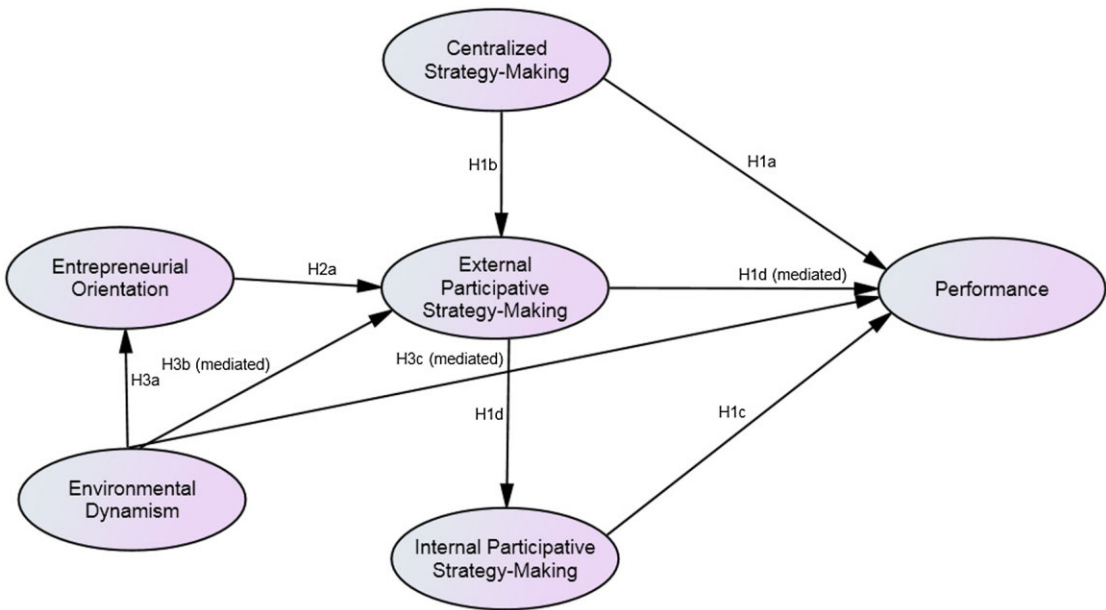
All firms face environments that are more or less uncertain, but small firms have fewer resources to call upon to acclimatize to these uncertainties (Liesch, Welch, and Buckley 2011). One poor decision can jeopardize the

very survival of the small firm. The recent global financial crisis underscores the profound impact that the environment can have, even on firms that are fundamentally well-managed. The dynamism that presents in uncertain environments stems from factors such as government regulations, competition and technological progress (Zahra 1993). Focusing on the dynamism aspect of uncertain environments, we argue that participative strategy-making helps owner-managers to negotiate these conditions by increasing the information available to owner-managers to acclimatize to these uncertainties. This helps to sustain small firms, increasing their capacity to understand the causes of dynamism and to adjust to them (Liesch, Welch, and Buckley 2011).

Adjusting practices to adapt to environmental dynamism is well-researched (Brews and Purohit 2007; DeSarbo et al. 2005; Eisenhardt 1989; Hart and Banbury 1994; McGee and Sawyerr 2003; Miller and Cardinal 1994; Van Gelderen, Frese, and Thurik 2000; Zahra 1993). These authors explain that the extent of environmental dynamism depends on how managers perceive factors such as the degree of predictability of financial and capital markets, competitor actions, government regulations, and general conditions. Dynamism can present the alert firm with abundant but nonetheless unpredictable opportunities. These alert firms react to such dynamism through actions such as risk-accommodating innovative behaviors, pioneering proactive strategies, and also by adjusting their approach to strategy-making to draw upon more participation from informed outsiders. As such, firms in dynamic environments exhibit higher levels of EO and more external participative strategy-making.

Firms can leverage off their strategy-making activities to improve performance in dynamic environments as Eisenhardt (1989) found in her study of small firms in high velocity environments. Her study shows that speedy decision-making is critical, implying that activities reliant on collective intuition are best suited to turbulent environments (Eisenhardt 1989). The need for speedier decisions does not imply that less information is used but that extensive use of different information sources accelerates the process, making it more suitable for dynamic environments. External participative strategy-making maximizes management's ability to identify and evaluate opportunities that present in these environments (Van Gelderen, Frese,

Figure 1
Research Model



With different relationships in Entrepreneurial and Conservative firms (H2b and H2c)

and Thurik 2000). However, authors such as Andersen (2004) argue that different approaches may coexist in dynamic environments.

Andersen's (2004) point is that an integrative approach to strategy-making serves firms facing dynamic environments better than do other approaches. This argument is in line with Hart and Banbury's (1994) finding that multiple approaches are indicative of broader strategy-making capabilities. Therefore, ensuring ambidexterity in dynamic environments helps firms to both stay abreast of environmental changes, which improves opportunity and threat recognition, while also assisting in the development of capabilities to deal with this knowledge (Kim and Rhee 2009). Hence, strategy-making approaches that are devoid of participation, such as centralized strategy-making, limit a firm's ability to take advantage of the abundance of opportunities that present in dynamic environments. Therefore, we hypothesize that:

H3a: There is a positive association between environmental dynamics and EO in small firms.

H3b: The positive association between environmental dynamics and external participative strategy-making in small firms is mediated by EO.

H3c: The positive association between environmental dynamics and performance is mediated by EO and external participative strategy-making.

These relationships are summarized in Figure 1.

Research Method

A survey-based study of strategy-making and performance was conducted with small firms with fewer than 100 employees in New Zealand. We chose New Zealand as the setting for our research for a number of reasons. First, New Zealand is a country of small firms and they drive its economic growth. Only about 0.2 percent of all New Zealand firms have more than 100 employees (New Zealand Bureau of Statistics 2007). Small firms tend to dominate industries such as agriculture, construction,

property services, retail, and personal services. They are also more prevalent in high growth industries. The deregulated New Zealand economy has been particularly supportive of small firms, helping them to compete more effectively with large firms, and technological changes alongside opportunities for outsourcing have assisted in the growth of these small firms (Morrison 1999). Second, because the domestic market in New Zealand is small, it is important for firms to export to larger markets, especially to nearby Australia. In this regard, these firms have little choice but to form strong ties to ensure that relationships with importers are sustained. These reasons underpin the importance of small firms to the New Zealand economy, but also offer a setting in which both internal and external participation in strategy-making is likely to occur.

Third, research on national cultures (Hofstede 2001; House et al. 2004) suggests that several cultural characteristics may make participative practices more likely in New Zealand. Hofstede, for example, characterizes the New Zealand population as scoring high on collectivism and low on assertiveness, which suggests that decision-making by teams, avoidance of conflict, and group accountability will nurture participation. Hofstede's research also indicates that the New Zealand population scores low on power distance, indicating a democratic environment with a need for consultation and low tolerance of status differences, which further supports team practices in firms. Low power distance also means that buy-in into decision-making is often expected by employees. House et al. (2004) explain that New Zealanders are generally performance oriented and that visionary leaders encourage and reward innovation and performance improvements. This constellation of conditions is conducive to internal participation in strategy-making.

Sample

A sample of 2,000 New Zealand small firms was selected randomly from the Kompass database. The selected firms excluded farming operations, foreign-owned firms, and firms with 100 or more employees. Small and medium enterprises are defined very differently across the world, ranging from 500 full-time equivalent employees in the United States to 250 in Europe, 200 in Australia and 100 in New Zealand (Analoui and Karami 2002; Curran and Blackburn 2001). There is no agreement on a

universally recognized definition. Although our classification of small firms accords with the widely accepted small firm classification by the New Zealand academic community (e.g., Massey 2011; McGregor and Gomes 1999), there was also a compelling rationale for this decision. Limiting the size to between 10 and 99 employees ensured that there was sufficient homogeneity among firms in terms of size to draw sensible conclusions. However, in line with previous research (Gray 2004; O'Regan and Ghobadian 2004), only firms with at least 10 full-time employees were considered in this study in order to allow for meaningful participation in strategy-making to occur. This further reduced the sample size to 320 of the useable questionnaires. The questionnaire was mailed to the owner-manager of each small firm, and a reminder was mailed one month later. A total of 504 questionnaires were returned of which 477 were deemed useable, with a response rate of 24 percent. The 320 small firms were distributed across manufacturing (44 percent), services (25 percent), retail/wholesale (16 percent), and construction (15 percent). The majority of the firms were privately held companies (71 percent), with 12 percent owner operated, 8 percent run as partnerships and the remainder public companies.

Variables Measured

Firm Performance was measured with the financial performance scale developed by Covin and Slevin (1989) and Gupta and Govindarajan (1984). Respondents were asked to indicate on a five-point Likert scale the "importance" of 10 financial measures, including sales level and growth, gross and net profit, return of equity and investment, and ability to fund growth. They were then asked to indicate their satisfaction with their firm's performance for the same 10 performance measures. The products of the "satisfaction" scores and the "importance" scores were obtained to compute a weighted average performance index for each firm. The higher the aggregate score on this relative index, the better the perceived level of firm performance in terms of sales, sales growth, cash flow, return on equity and investment, and various profit measures. Perceived performance is widely used in research relating to large firms (e.g., Lebas and Euske 2002; Lyon, Lumpkin, and Dess 2000), and is often preferred in small firm research where public data are not available and respondents are hesi-

tant to provide self-reported information (Brockman, Jones, and Becherer 2012; Li, Veliyath, and Tan 2013). This measure was validated by comparing perceived performance for various industry sectors against national statistics and no significant differences were found.

Strategy-Making was measured with the Hart scale as modified by Dess, Lumpkin, and Covin (1997). Their scale consists of 25 items and is scored on a five-point Likert scale, ranging from 1 “strongly disagree” to 5 “strongly agree.” Dess, Lumpkin, and Covin (1997) tested this scale in large firms, with factor analysis revealing four strategy-making measures. We used three of these measures to capture internal and external participation and centralization in strategy-making.

Entrepreneurial Orientation was measured by using the scale developed by Covin and Slevin (1989). This scale consists of nine items, three items measuring each of innovativeness, proactiveness, and risk-taking. Covin and Slevin (1989) and Miller (1983, p. 79) explain that the items in this scale should be aggregated together because EO can be viewed as a “basic, uni-dimensional strategic orientation.” This EO scale has been used in several previous studies (Miller and Friesen 1984; Voss, Voss, and Moorman 2005). Higher EO scores indicate firms with more of an entrepreneurial nature whereas lower scores indicate firms with more of a conservative nature (Miller 1983). Although EO is a continuous measure and can be used as such, it can also be used to classify firms as entrepreneurial or conservative. We use both approaches with EO used as a mediator when considered as a scale and as a moderator when comparing entrepreneurial and conservative firms.

Environmental dynamism was assessed with items developed by Khandwalla (1976/77) to assess environmental uncertainty, using the dynamism subscale items. This scale suited our purpose to test for dynamism in the context of a small economy. More dynamic environments are characterized by greater variation in customer-buying behavior, greater variation in regard to the nature of the competition, and more market change and turbulence. Respondents’ ratings on these items were averaged to arrive at a dynamism index. Although some of these scales have been in use for some time, they are closely related to the definition of our constructs (e.g., dynamism), and still widely

used in research (e.g., Green, Covin, and Slevin 2008; Griffiths and Webster 2010).

Control variables. Past research shows that industry, firm size and age can influence small firm performance so these variables were also incorporated into the analysis as control variables. This involved categorizing industry as services, manufacturing, construction or retail/wholesale, and using the number of full-time of employees and the age of the firm as covariates in the analysis.

Validity

Using AMOS Version 19, confirmatory factor analysis (CFA) was applied to test the internal validity of the scales used to measure internal participative strategy-making, external participative strategy-making, centralized strategy-making, EO, and the dynamism of firm environments. In particular, the root mean square estimate of error approximation (RMSEA) statistics (at most 0.06), the Goodness of Fit Index (GFI) statistics (more than 0.90) and the normed chi-square statistics (between one and three) suggested adequacy for all the measurement models (Byrne 2001). The discriminant validity of these measurement models was tested using the imputed correlations for the full measurement model. The results confirmed discriminant validity in that, as shown in Table 2, each item loads strongly on only the appropriate factor. Values for Cronbach’s alpha (all above 0.70) showed that reliable scales can be constructed in all cases but one. The centralized strategy-making scale has poor reliability (Cronbach’s alpha = 0.468); however, this scale has acceptable face validity and acceptable internal validity (RMSEA = 0.050, chi-square = 3.622, $df = 1$, $p = 0.165$ (see Table 2). The skewness in the age and size distributions made it necessary to use a log-transformation for these variables throughout the study.

We followed the same approach as Verreyne and Meyer (2010) to test the validity of the performance data. Perceived performance for various industry sectors was compared with actual financial performance. We found that the reporting quarter during which the survey was conducted had a number of notable characteristics, such as increases in internal demand and annual spending on durable goods. Similar to the national statistics, perceived performance levels were higher for retail/wholesale firms, and, to a lesser extent,

Table 2
Implied Correlations for Measurement Models (Bold for Assigned Constructs)

	Entrepreneurial Orientation	Environmental Dynamism	Centralized SM	External Participative SM	Internal Participative SM
A strong emphasis on R&D, technological leadership, and innovation	0.574	0.247	-0.042	0.300	0.200
Many new lines of products and services	0.549	0.236	-0.040	0.287	0.191
Changes in product or service lines have usually been quite dramatic	0.684	0.294	-0.050	0.358	0.238
Typically initiates actions which competitors respond to	0.570	0.245	-0.042	0.298	0.198
Is very often the first to introduce new products/services, administrative techniques, operating technologies, etc.	0.650	0.279	-0.048	0.340	0.226
Typically adopts a very competitive, "undo-the-competitors" philosophy	0.518	0.223	-0.038	0.271	0.180
High-risk projects with chances of very high returns	0.630	0.271	-0.046	0.330	0.219
Owing to the nature of the environment, bold wide-ranging acts are necessary to achieve the firm's objectives	0.721	0.310	-0.053	0.377	0.251
Typically adopts a bold, aggressive posture in order to maximise the probability of exploiting potential opportunities	0.626	0.269	-0.046	0.327	0.218
Market dynamism and uncertainty vary a great deal from one line to another	0.349	0.812	-0.121	0.117	0.030
The nature of competition varies a great deal from one line to another	0.381	0.885	-0.132	0.127	0.033
Customer buying habits vary a great deal from one line to another	0.305	0.710	-0.106	0.102	0.026
We are a highly diversified firm and operate in unrelated industries	0.199	0.463	-0.069	0.067	0.017
The chief executive of our firm insists on placing his/her mark on virtually every major initiative	-0.020	-0.041	0.276	0.062	0.043
Business and product planning in this firm is largely an internal process that seeks to contain the amount of information leaking to the outside	-0.029	-0.058	0.389	0.088	0.061
Strategy for this firm is primarily provided by the owner-manager/chief executive and a few of his/her fellow top managers/executives	-0.042	-0.085	0.570	0.129	0.090
There is a clear blueprint for this firms strategy that was set some time ago and has changed very little	-0.033	-0.068	0.453	0.102	0.071

Table 2
Continued

	Entrepreneurial Orientation	Environmental Dynamism	Centralized SM	External Participative SM	Internal Participative SM
Our business and product planning process involves customers, suppliers, and providers of funds	0.284	0.078	0.123	0.544	0.374
We spend as much time as possible with customers and other key stakeholders, listening to what they have to say about the firm	0.380	0.104	0.164	0.726	0.499
Business planning in our firm is ongoing and involves everyone in the process to some degree	0.358	0.099	0.155	0.685	0.471
Our firm continually adapts by making appropriate changes in its strategy based upon feedback from the market place	0.294	0.081	0.127	0.563	0.387
Decisions in this firm are usually made at the level where the most accurate information is available	0.180	0.019	0.081	0.355	0.517
People are encouraged to experiment in this firm so as to identify new, more innovative approaches or products	0.182	0.019	0.082	0.359	0.523
Conflict in this firm is often suppressed rather than dealt with openly	0.163	0.017	0.074	0.322	0.468
Decisions concerning business strategy are made on a consensus basis, involving people from different departments or areas in the firm	0.215	0.023	0.098	0.425	0.619
There is a clear and consistent set of values in this firm that governs the way we do business	0.217	0.023	0.099	0.430	0.625
Long-term potential is valued over short-term performance in this firm	0.181	0.019	0.082	0.359	0.522
The way we do things in this firm is well suited to the business we are in	0.211	0.023	0.096	0.418	0.607
Most people in this firm have input into the decisions that affect them	0.243	0.026	0.110	0.480	0.697
People with unpopular views are given a fair hearing in this firm	0.241	0.026	0.109	0.477	0.694
Cooperation and collaboration across functional roles are actively encouraged	0.261	0.028	0.118	0.516	0.750
Most people in this firm are treated equitably, regardless of rank or status	0.247	0.026	0.112	0.489	0.711
Working in this firm is like being part of a team	0.265	0.028	0.120	0.524	0.762

Table 3
Check for Nonresponse Bias Based on Return Dates for
Questionnaires

Variables	Chi-Square (<i>df</i> = 2) Kruskal–Wallis Test	<i>p</i> -value
Size	0.029	0.986
Environmental Dynamism	1.239	0.538
Entrepreneurial Orientation	0.961	0.618
Internal Participative SM	1.578	0.454
External Participative SM	2.517	0.284
Centralized SM	0.159	0.924
Performance	0.205	0.902

for firms in the construction sector. In addition, services and manufacturing sectors reported lower performance ($MN = 97.67$, $SD = 58.77$). These similarities with the national statistics suggest that the perceived performance levels used in this survey are valid.

Nonresponse bias was assessed on the basis that later respondents are more closely related to nonrespondents than early respondents (Armstrong and Overton 1977). Therefore the early respondents were compared with the late respondents. Unlike Verreynne and Meyer (2010), we divided only the data used in this paper, rather than all valid responses, into three groups: those that responded in the first two weeks after the questionnaire was distributed, those that responded in the last two weeks before the deadline, and the rest. We used nonparametric (Kruskal–Wallis) tests for distributional differences. As shown in Table 3, there were no significant differences found for any of the variables included in this study.

Data Analysis

A structural model was fitted using the scale data and AMOS version 19 in order to test the conceptual model shown in Figure 1. After classifying firms as entrepreneurial or conservative on the basis of their EO scores (above or below the median), a test of invariance was performed in order to establish if there were significant differences in the relationships shown in Figure 1 in the case of entrepreneurial and conservative firms.

Findings

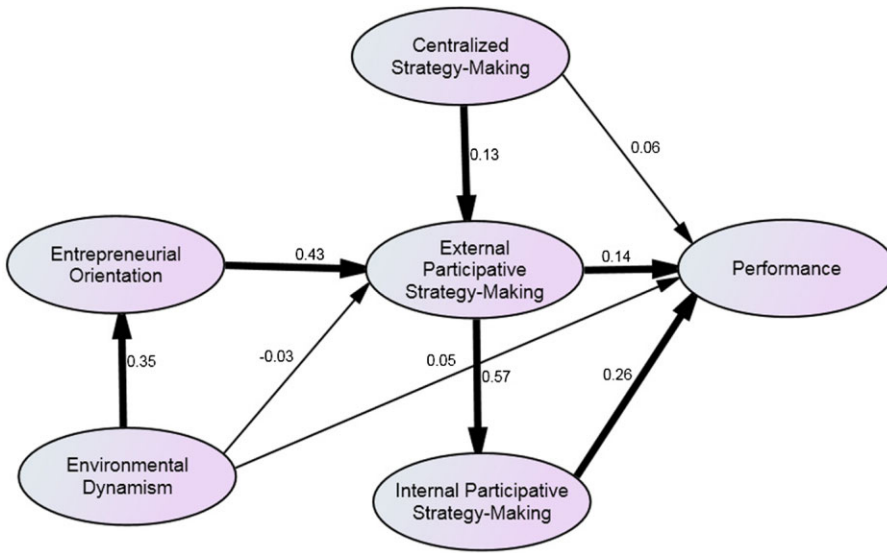
Table 4 indicates that there are significant correlations with firm characteristics and EO. Entrepreneurial firms tend to be younger and they are more likely to belong to the retail/wholesale industry and less likely to belong to the construction industry. In addition, manufacturing firms are less likely to use internal participative strategy-making, and firms in the retail/wholesale industry are more likely to perform well. These results indicate that firm characteristics have an important role to play in any model that deals with EO, strategy-making, and performance.

Table 4 also reports significant but weak positive correlations between internal/external participative strategy-making and performance. Further, internal and external participation show a significant positive correlation of moderate strength ($r = 0.56$, $p < 0.01$), suggesting that there may be support for the mediation suggested in H1b. However, there appears to be no support for H1a because the correlation between centralized strategy-making and performance is not significant. There is support for H2a in that external participative strategy-making shows a significant positive correlation with EO. In addition, there is tentative support for H3a and H3b with environmental dynamism showing significant positive correlations with EO and external participative strategy-making. Whereas the correlations matrix provides an overview of the relationships between variables, structural models were used for hypothesis testing.

Table 4
Descriptive Statistics and Correlations for Scales (* $p < .05$, ** $p < .01$)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Mean	4.17	4.10	3.39	3.50	3.77	138.62	5.27	4.60	0.16	0.25	0.44	0.15
Standard Deviation	0.97	1.36	0.65	0.71	0.60	38.84	3.27	3.22	0.37	0.44	0.50	0.36
Cronbach's Alpha	0.850	0.818	0.468	0.778	0.879							
RMSEA	0.045	0.051	0.050	0.000	0.039							
1. Entrepreneurial Orientation	1	0.359**	-0.086	0.409**	0.325**	0.178**	-0.111*	0.083	0.147**	-0.025	0.016	-0.143*
2. Environmental Dynamism	0.359**	1	-0.078	0.116*	0.069	0.090	0.017	0.010	0.068	0.014	-0.018	-0.061
3. Centralized SM	-0.086	-0.078	1	0.091	0.052	0.078	0.038	0.018	-0.070	-0.027	0.015	0.085
4. External Participative SM	0.409**	0.116*	0.091	1	0.564**	0.315**	-0.027	0.061	0.109	-0.019	-0.049	-0.021
5. Internal Participative SM	0.325**	0.069	0.052	0.564**	1	0.349**	-0.021	-0.077	0.078	0.040	-0.150**	0.079
6. Performance	0.178**	0.090	0.078	0.315**	0.349**	1	0.008	0.058	0.159**	-0.062	-0.062	-0.001
7. log(Age)	-0.111*	0.017	0.038	-0.027	-0.021	0.008	1	0.084	0.054	-0.137*	0.065	0.021
8. log(Size)	0.083	0.010	0.018	0.061	-0.076	0.057	0.084	1	-0.152**	0.024	0.092	-0.002
9. Retail/Wholesale	0.147**	0.068	-0.070	0.109	0.078	0.159**	0.054	-0.152**	1	-0.253**	-0.384**	-0.183**
10. Service	-0.025	0.014	-0.027	-0.019	0.040	-0.062	-0.137*	0.024	-0.253**	1	-0.513**	-0.245**
11. Manufacturing	0.016	-0.018	0.015	-0.049	-0.150**	-0.062	0.065	0.092	-0.384**	-0.513**	1	-0.370**
12. Construction	-0.143*	-0.061	0.085	-0.021	0.079	-0.001	-0.021	-0.002	-0.183**	-0.245**	-0.370**	1

Figure 2
Structural Model



As such, the conceptual model was tested with the fitted model shown in Figure 2 controlling for the effects of firm size, age and industry. This model describes the data well (chi-square = 25.56, $df = 20$, $p = 0.219$). All of the significant links are shown in bold with standardized weights and standardized total effect sizes (for the overall sample) given in Tables 5 and 6. The lack of significance for two of the paths provides evidence of mediation effects. In particular, the relationship between centralized strategy-making and performance is mediated by participative strategy-making, suggesting that centralized strategy-making will only assist performance if it relates to external participative strategy-making. Finally, there is no direct link from environmental dynamism to external participative strategy-making and no direct link from environmental dynamism to performance, suggesting that environmental dynamism will only stimulate more external participative strategy-making and better performance in firms with an EO.

Figure 2 further suggests H1d is not supported. Contrary to expectation there is a significant direct path from external participative strategy-making to performance for the overall sample in Table 5 as well as the expected significant indirect path through internal partici-

pative strategy-making. This suggests that, even without internal participative strategy-making, external participative strategy-making will have a positive association with performance. However, there is no support for H1a with no significant direct relationship between centralized strategy-making and performance. In addition, instead of the negative association proposed in H1b, there is a weak but significant positive association between centralized strategy-making and external participative strategy-making resulting in a nonsignificant total standardized performance effect for centralized strategy-making for the overall sample, reported in Table 6.

There is support for H2a, with external participative strategy-making significantly more likely in firms with higher EO. Finally, the results for the overall sample (Table 5) show support for H3a with EO stronger in more dynamic environments. Also, as proposed in H3b and H3c, there are no significant direct links between the level of environmental dynamism and external participative strategy-making or between environmental dynamism and performance, indicating that there are significant indirect relationships due to EO.

H2b and H2c were addressed next using an invariance test based on the model shown in

Table 5
Comparison of Standardized Model Weights for Entrepreneurial and
Conservative Firms and for Combined Samples
($p < .05$, ** $p < .01$, *** $p < .001$)*

Link To	Link From	Conservative Firms	Entrepreneurial Firms	Overall Sample
Entrepreneurial Orientation	Environmental Dynamism	0.289***	0.085	0.350***
External Participative SM	Entrepreneurial Orientation	0.288***	0.259***	0.427***
External Participative SM	Centralized SM	0.210**	0.055	0.125*
External Participative SM	Environmental Dynamism	0.101	-0.160*	-0.029
Internal Participative SM	External Participative SM	0.455***	0.607***	0.566***
Entrepreneurial Orientation	Log(Age)	-0.051	-0.168*	-0.135**
Entrepreneurial Orientation	Retail Wholesale	0.154*	0.153*	0.148**
Entrepreneurial Orientation	Log(Size)	0.059	0.164*	0.113*
Performance	Log(Age)	-0.052	0.071	-0.001
Performance	Retail Wholesale	-0.021	0.271***	0.138**
Performance	Centralized SM	0.163*	0.001	0.064
Performance	Log(Size)	-0.006	0.188*	0.088
Performance	Internal Participative SM	0.318***	0.162	0.262***
Performance	External Participative SM	0.146	0.137	0.135*
Performance	Environmental Dynamism	0.034	0.071	0.051

Figure 2. In this test the median value of EO was used to classify each firm as entrepreneurial (above the median on EO) or conservative (not above the median EO). A chi-square test of association showed significant differences (chi-square = 11.02, $df = 3$, $p = 0.012$) between these two groups of firms in terms of industry, with the construction industry better represented in the conservative group (21 percent) than the entrepreneurial group (9 percent). A MANOVA test of other firm characteristics also showed a significant difference between the two groups ($F(6,313) = 13.677$, $p < 0.001$, partial eta-squared = 0.208). As shown in Table 7, although there was no significant difference between the groups in terms of age, size, and centralized strategy-making, there were significant differences in terms of environ-

mental dynamism and participative strategy-making. The entrepreneurial firms were operating in a very dynamic environment (mean = 4.50) compared with the conservative firms (mean = 3.67) and, as expected, their level of internal and external participative strategy-making was higher than that of conservative firms.

Tables 5 and 6 show the standardized weights and performance effect sizes when the model shown in Figure 2 is fitted to conservative and entrepreneurial firms separately and jointly. The invariance test, comparing the fitted models for conservative and entrepreneurial firms, indicated significant differences in the model weights for entrepreneurial and conservative firms (chi-square = 33.292, $df = 15$, $p = 0.004$). The comparison of the models for

Table 6
Total Standardized Performance Effect Sizes with Bootstrapped
Significance Levels and Goodness-of-Fit Statistics ($p < .01$)**

	Conservative Firms	Entrepreneurial Firms	Overall Sample
Environmental dynamism	0.087	-0.038	0.085
Log(Age)	-0.056	0.042	-0.017
Retail and wholesale	-0.008	0.280**	0.159**
Log(Size)	-0.001	0.198**	0.102*
Entrepreneurial orientation	0.084**	0.061**	0.121**
Centralized strategy-making	0.224**	0.015	0.100
External participative strategy-making	0.291**	0.236**	0.284**
Internal participative strategy-making	0.318**	0.162	0.262**
R-Square (percent)	21.9	16.8	17.1
Chi-Square Value ($df = 22$)	14.625	18.875	24.564
p -value	0.797	0.530	0.219

Table 7
A comparison of the Characteristics of Entrepreneurial and
Conservative Firms

	Conservative Firms (N = 155)		Entrepreneurial Firms (N = 165)		ANOVA tests		
	Mean	Std. Deviation	Mean	Std. Deviation	F (1,318)	p-value	Partial eta-squared
Log(Size)	3.19	0.59	3.24	0.60	0.598	0.440	0.002
Log(Age)	3.34	0.83	3.20	0.78	2.354	0.126	0.007
Environmental dynamism	3.67	1.31	4.50	1.27	33.308	0.000	0.095
Internal Participative SM	3.59	0.621	3.94	0.53	28.835	0.000	0.083
External Participative SM	3.27	0.72	3.71	0.63	33.220	0.000	0.095
Centralized SM	3.46	0.62	3.33	0.68	3.017	0.083	0.009

these two groups of firms must be undertaken in the context in which firms operate. In general, the entrepreneurial firms are operating in very unstable environments, but this is not the case for the conservative firms. H2b and H2c relate to the relationship between strategy-making and performance in these two types of firms. Table 6 shows that in the case of conservative firms all three strategy-making approaches (centralized, internal participative,

and external participative) are associated with positive performance. This suggests that firms operating in more stable environments will benefit from using all of these types of strategy-making. Table 6 shows that this is not the case for entrepreneurial firms operating in very unstable environments. In these firms, external participative strategy-making is associated with improved performance but the effect of centralized strategy-making and internal

participative strategy-making on performance is not significant. These results suggest support for H2b in that centralized strategy-making is only beneficial for conservative firms, but only partial support for H2c is reported. Although external participative strategy-making is beneficial for entrepreneurial firms operating in very unstable environments, it is also useful for conservative firms operating in more stable environments.

However, there are other interesting differences between entrepreneurial and conservative firms that were not hypothesized. First, whereas internal and external participative strategy-making were similarly useful for conservative firms, Table 6 shows that external participative strategy-making is more useful for entrepreneurial firms than internal participative strategy-making. Second, although greater instability in the environment drives a stronger EO in the case of conservative firms, this is not the case for entrepreneurial firms operating in highly unstable environments. Third, it seems that greater instability in the environment is associated with less external participative strategy-making in the case of entrepreneurial firms operating in very unstable environments, whereas greater instability in the environment is associated with more external participative strategy-making in the case of conservative firms when the EO effect is taken into account.

Finally, it seems that size, age, and industry have no major effect on the model for conservative firms, except that a stronger EO is likely in the case of retail/wholesale firms, although this has a weak association with performance. However, in the case of entrepreneurial firms operating in very unstable environments, a stronger EO is more likely to be associated with larger and younger firms as well as in retail/wholesale firms. For these firms, it is found that performance is also improved in the case of retail/wholesale firms and for larger firms.

As illustrated in Table 8, in the sample of conservative firms H1c and H1d were supported with no direct relationship between external participative strategy-making and performance, whereas an indirect relationship was found through internal participative strategy-making. However, in the case of entrepreneurial firms operating in very unstable environments, external participative strategy-making was more important than internal participative strategy-making, but neither of these effects was significant on their own. There was

support for H1a in the case of conservative firms with centralized strategy-making relating positively with performance. However, for neither group of firms was there support for H1b. Centralized strategy-making has a positive association with external participative strategy-making in the case of conservative firms and no effect in the case of entrepreneurial firms. However, for both groups of firms there was support for H2a with a stronger EO associated with more external participative strategy-making. Finally, it was found that only in the case of conservative firms does more environmental stability relate to higher levels of EO, and hence the level of external participative strategy-making and performance, supporting H3a, H3b, and H3d. In entrepreneurial firms operating in very unstable environments, higher levels of environmental instability are not associated with EO and they actually appear to limit the use of external participative strategy-making.

As summarized in Table 8, we found support for the beneficial effects of centralized and participative strategy-making (H1a, H1c, H1d) in conservative firms, with only external participative strategy-making having a significant association with performance in the case of entrepreneurial firms. In addition, the association between dynamism and EO hypothesized in H3a was only significant in the case of conservative firms where greater environmental dynamism is related with better performance. Indeed, for entrepreneurial firms, the direction of the association between environmental dynamism and external participative strategy-making was negative (not positive as suggested in H3b), suggesting that additional instability is adversely associated with the most important strategy-making approach for these firms, relating to weaker performance. However, this result needs to be interpreted with caution, bearing in mind that the level of environmental dynamism is much higher in the case of entrepreneurial firms than in conservative firms.

It seems therefore that environmental dynamism has a small but significant positive association with performance in the case of conservative firms whereas environmental dynamism has a small but significant negative association with performance in the case of entrepreneurial firms operating in very unstable environments (contrary to H3c). Therefore, some environmental dynamism might be beneficial in that it promotes EO, but too much

Table 8
Summary for Hypothesis Support

Hypothesis	Hypothesis Supported		
	Conservative Firms	Entrepreneurial Firms	Overall
H1a: Centralized SM is associated with performance	Yes	No	No
H1b: Centralized SM is associated with external PSM	No	No	No
H1c: Internal PSM is associated with performance	Yes	No	Yes
H1d: The association of external PSM with performance is mediated by internal PSM	Yes	Yes	No
H2a: EO is positively related to external PSM	Yes	Yes	Yes
H2b: Centralized SM is positively related to performance only in the case of conservative firms	Yes	Yes	
H2c: Participative SM is related with performance but only in the case of entrepreneurial firms	Yes	Yes, but only for external PSM	
H3a: Environmental dynamism is related with EO	Yes	Yes	Yes
H3b: The association of environmental dynamism with external PSM is mediated by EO	Yes	No	Yes
H3c: The association of environmental dynamism with performance is mediated by EO and external PSM	Yes	Yes	Yes

dynamism can be detrimental for small firms. Finally, Table 6 shows significant differences in regard to the effects of age, size, and industry in the case of conservative and entrepreneurial firms. For conservative firms, none of these factors has a significant association with performance. However, in the case of entrepreneurial firms, older firms are at a performance disadvantage whereas larger firms and firms in the retail/wholesale industry have an advantage.

Discussion and Implications

In the New Zealand small firm setting, we validate three of the strategy-making approaches suggested by Dess, Lumpkin, and Covin (1997). We confirm that researchers should view strategy-making in small firms as multifaceted, rather than opting for the traditional categorization of formal versus informal

to explore their associations with firm performance. Participative approaches are related to performance for all firms, whereas centralized strategy-making is only important for conservative firms.

Internal participation is beneficial because it creates greater buy-in, broader consideration of issues, and allows more diverse information to be introduced into strategy-making (Wooldridge and Floyd 1990), thereby shaping outcomes with support internal to the firm. Inconsistent information is better evaluated and decisions are more readily accepted and implemented (Nutt 2001). Further, small firms are better able to deal with growth if organizational members know their decision-making roles, responsibilities, and authorities, and have the skills to contribute to improved outcomes (Gilmore and Kazanjian 1989).

Similar to McGee and Sawyerr (2003), we also confirm that small firms may turn to external participation because of a lack of resources such as expert staff to gather, assimilate, and process information from outside of the firm. The information obtained through these interactions on customer needs, advice from consultants or feedback on decisions leads to awareness of external circumstances and identification of opportunities through an active engagement of external stakeholders. The literature has traditionally highlighted the importance of external practices such as networking and the inclusion of outsiders (e.g., Collier, Fishwick, and Floyd 2004; Robinson 1982). Small firms are generally resources-limited with constraints on all business functions, and, in many cases, with several business functions performed concurrently by the same person. Day-to-day operations therefore tend to take precedence over strategic thinking and decision-making. External participative strategy-making focuses the firm, forcing it to be more strategic. Further, external stakeholders provide the information, the focus and the urgency required to galvanize internal strategy-making into action. As explained by Hart (1992), it helps firms not only to gain knowledge about the strategies and needs of key stakeholders, but also to win consensus among these stakeholders. It also improves acceptance and legitimacy with stakeholders.

However, our results indicate that larger entrepreneurial firms will perform better than small ones. External participation and EO are related in all firms. However, Voss, Voss, and Moorman (2005) explain that participation does not ensure that creative ideas that are the birth of real opportunities will materialize. Accordingly, participation and EO are seen as complementary, intensifying the overall effectiveness of strategy-making. In entrepreneurial firms, it is necessary to interact with external stakeholders in order to understand better market needs and opportunities (Barringer and Bluedorn 1999). Furthermore, over-simplified approaches stifle the development of entrepreneurial cultures because they do not allow for the essentials of an innovative, experimental, and risk-taking culture to develop. As suggested by Covin, Green, and Slevin (2006), centralized strategy-making has more use in conservative firms because proactiveness, innovativeness, and risk-taking may inhibit analysis and formal planning.

Testing for the moderation effects of dynamism and EO concurrently allowed us to establish how relationships change for firms at different points on both the entrepreneurial-conservative and dynamic-stable environment continua. We found that entrepreneurial firms are more likely to be present in more dynamic environments. These firms did not find centralized approaches useful, and also derived more benefit from external than internal participation. Small firms use participation to improve predictability by drawing upon external networks to access information not otherwise obtainable—it assists the small firm to acclimatize to environmental dynamism (Liesch, Welch, and Buckley 2011). This is particularly beneficial when external networks can be meshed with the firm's internal network to capture, recognize, and take advantage of opportunities that would otherwise go unnoticed. Owner-managers of small firms can therefore expect external participative strategy-making to benefit their firms in dynamic environments where the ability to explore and exploit opportunities becomes strategic. This means that strategy-making may play a role in unfreezing old behaviors and developing new entrepreneurial behaviors. The majority of these entrepreneurial firms were on the extreme end of the dynamism continuum, and this result is not relevant to entrepreneurial firms in more stable environments.

As recognized by Bingham, Eisenhardt, and Furr (2007), the ability to leverage these organizational approaches can become strategic for entrepreneurial firms in dynamic environments. We extend this argument to the case of small firms that use participative approaches to strategy-making, who might then ultimately go on to embrace collaboration in other business functions. These authors, and others such as Barney (1991), suggest that participative approaches enable access to valuable resources from participating members. This can provide attractive opportunity flows and small firms can gain temporary competitive advantage which might become more permanent through effective institutionalization via strategy-making routines. The counter argument, namely that conservative firms flourish in stable environments, was also supported. These conservative firms were more likely to find performance benefits in the simultaneous use of all three forms of strategy-making. In stable environments, one of the main advantages underlying

participative strategy-making, namely its ability to improve identification of opportunities, is neutralized.

However, the moderation effect of dynamism is even more complex. In more dynamic environments, the positive effects of external participation are lost. In fact, in dynamic environments, the association with external participation and performance is negative. Under these circumstances, firms need to react quickly to changing conditions, which limits the time for participation during strategy-making. This result is supported by Wiklund and Shepherd (2005) who find that small firms with limited resources will benefit more from an EO in a stable environment. They further suggest that EO is a necessity, rather than a luxury, to help small firms to overcome constraints and they find that EO has the greatest effect on firm performance in a stable environment.

Finally, the ability in the small firm to appropriately combine the participation of external stakeholders with involvement from internal members of the firm under various conditions can provide the firm with a capability not widely seen in its rivals. This capability might realize as a dynamic capability (e.g., Eisenhardt and Martin 2000; Teece and Pisano 1994; Winter 2003) presenting the astute small firm with a competitive advantage enabling it to adjust to the uncertainties of operating in dynamic and unstable environments. It could be that this adjustment may mask what others have observed to be proactive risk-taking (e.g., Lumpkin and Dess 1996), which in fact is not risk-taking to these firms, but rather these firms have mastered a more acute awareness of the dynamism that presents in their environments.

The implications are thus twofold. First, this study uses a research approach in a small firm context that has hitherto been in the domain only of large firms. It is, nonetheless, likely that a number of other approaches to strategy-making may be identified in studies which focus on, for example, specific industries, or that are undertaken in other country contexts. Such research will be worthwhile to pursue to broaden our understanding of strategy-making in small firms and its contribution to firm performance. Second, although the presence of these approaches to strategy-making in small firms have been studied before, albeit mostly in separate studies, we investigate their simultaneous effects in different types of firms and under different conditions. We clearly identify

that all approaches are not universally useful. For example, successful conservative small firms appear to use all three types of strategy-making. However, entrepreneurial firms in dynamic environments seem to find strategy-making less useful, even though there is still a significant association between external participation and performance. This implies that small firms should carefully consider which approaches might render the best performance outcomes under different conditions. Such configurational studies (e.g., Dess, Lumpkin, and Covin (1997) can simultaneously address issues such as competitive strategies, environmental uncertainty, owner-manager characteristics, and strategy-making to further enhance our understanding of strategic management practices in small firms. Similarly, more case studies may provide deeper insights into the nature of these practices.

Limitations need be considered while interpreting this research. First, as a survey-based study, it establishes the perceptions of the owner-managers of sampled firms on the suite of issues that are explored here. An owner-manager who views their environment as dynamic is therefore likely to match their actions to that perception when responding to survey questions. To address this issue, scales used in this study are worded neutrally. Second, the cross-sectional design implies that causality cannot be established. To test causality, longitudinal data would have to be collected in order to explain how current strategy-making impacts future performance. Third, this study is based on responses for a single survey. This means that common method bias may have affected the results. However, the work of Siemsen, Roth, and Oliveira (2010) with respect to multivariate linear relationships shows that common method bias generally decreases when additional independent variables are included in a regression equation. In this study there are eight independent variables, suggesting that common method variance has been addressed to some extent in the analysis itself. In addition, the Harman single factor test for common method variance suggests that 12 factors are needed to describe the data rather than one, together explaining 61 per cent of the total variation, and thereby indicating that common method variance is unlikely to be a problem. Fourth, although social desirability is often a common source of common method bias, this is unlikely to be true for this study

due to the impersonal nature of the constructs. This has been confirmed in the case of the performance construct and in Table 3 where the issue of nonresponse bias is addressed. No significant differences for early and late respondents suggest that nonresponse bias is also unlikely in this study. Finally, it needs to be recognized that the incidence of participative strategy-making in small firms in New Zealand could be associated with factors in addition to the size of firms, such as the New Zealand national and business culture. This was explained previously in this paper.

Conclusion

Strategy-making is one of the most complex tasks that managers attempt, simultaneously managing new technologies, societal and environmental trends, competitors, customers, and other external and internal stakeholders (Eppler and Platts 2009). This study draws a number of important conclusions on strategy-making in small firms. First, we report that internal participative strategy-making is significantly related to firm performance, suggesting that the involvement of employees in strategy-making is a suitable way for small firms to best ensure that the decisions that result will improve the competitive position of the firm. Second, participative strategy-making in small firms should involve external as well as internal stakeholders. As Robinson (1982) argues, small firms have to be involved continuously in strategy-making, and external stakeholders can provide the impetus for doing so, keeping the firm apprised of its changing business environment. Finally, small firms in dynamic and unstable environments are most likely to benefit from the use of high levels of external participation in strategy-making. However, in more stable environments, both internal and external participation is important, but centralized strategy-making is also useful, particularly when this motivates more external participative strategy-making.

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References

Alpkan, L., C. Yilmaz, and N. Kaya (2007). "Marketing Orientation and Planning Flex-

ibility in SMEs," *International Small Business Journal* 25(2), 152–172.

Analoui, F., and A. Karami (2002). "How chief executives' perception of the environment impacts on company performance," *Journal of Management Development* 21(4), 290–305.

Andersen, T. J. (2004). "Integrating Decentralized Strategy Making and Strategic Planning Processes in Dynamic Environments," *Journal of Management Studies* 41(8), 1271–1299.

Anderson, A. R., and M. H. Atkins (2001). "Business Strategies for Entrepreneurial Small Firms," *Strategic Change* 10, 311–324.

Ansoff, H. I. (1987). "The Emerging Paradigm of Strategic Behaviour," *Strategic Management Journal* 8, 501–515.

Armstrong, J. S., and T. S. Overton (1977). "Estimating Non-response Bias in Mail Survey," *Journal of Marketing Research* 14, 396–402.

Barney, J. (1991). "Firm Resources and Sustained Competitive Advantage," *Journal of Management* 17(1), 99–120.

Barringer, B. R., and A. C. Bluedorn (1999). "The Relationship between Corporate Entrepreneurship and Strategic Management," *Strategic Management Journal* 20, 421–444.

Beaver, G. (2002). "Strategy and Management in the Smaller Enterprise," *Strategic Change* 11(4), 175–181.

Beaver, G., and P. Jennings (2000). "Editorial Overview: Small Business, Entrepreneurship and Enterprise Development," *Strategic Change* 9, 397–403.

Bhide, A. (1994). "How Entrepreneurs Craft Strategies that Work," *Harvard Business Review* 72(2), 150–161.

Bingham, C. B., K. M. Eisenhardt, and N. R. Furr (2007). "What Makes a Process a Capability? Heuristics, Strategy and Effective Capture of Opportunities," *Strategic Entrepreneurship Journal* 1(1–2), 27–47.

Bourgeois, L. J., and D. Brodwin (1984). "Strategic Implementation: Five Approaches to an Elusive Phenomenon," *Strategic Management Journal* 5(3), 241–264.

Brews, P., and D. Purohit (2007). "Strategic Planning in Unstable Environments," *Long Range Planning* 40(1), 64–83.

Brockman, B. K., M. A. Jones, and R. C. Becherer (2012). "Customer Orientation and

- Performance in Small Firms: Examining the Moderating Influence of Risk-Taking, Innovativeness, and Opportunity Focus," *Journal of Small Business Management* 50(3), 429–446.
- Byrne, B. M. (2001). *Structural Equation Modeling with AMOS: Basic Concepts, Applications and Programming*. New Jersey: Lawrence Erlbaum.
- Chaffee, E. (1985). "Three Models of Strategy," *Academy of Management Review* 10, 89–98.
- Chen, M. L., and D. C. Hambrick (1995). "Speed, Stealth, and Selective Attack: How Small Firms Differ from Large Firms in Competitive Behaviour," *Academy of Management Journal* 38(2), 453–482.
- Ciavarella, M. A. (2003). "The Adoption of High-Involvement Practices and Processes in Emergent and Developing Firms: A Descriptive and Prescriptive Approach," *Human Resource Management* 42(4), 337–356.
- Collier, N., F. Fishwick, and S. W. Floyd (2004). "Managerial Involvement and Perceptions of Strategy Process," *Long Range Planning* 37, 67–83.
- Covin, J. G., and D. P. Slevin (1989). "Strategic Management of Small Firms in Hostile and Benign Environments," *Strategic Management Journal* 10(1), 75–87.
- Covin, J. G., K. G. Green, and D. P. Slevin (2006). "Strategic Process Effects on the Entrepreneurial Orientation–Sales Growth Rate Relationship," *Entrepreneurship: Theory and Practice* 30(1), 57–81.
- Cummings, S., and U. Daellenbach (2009). "A Guide to the Future of Strategy? The History of Long Range Planning," *Long Range Planning* 42(2), 234–263.
- Curran, J., and R. A. Blackburn (2001). *Researching the Small Enterprise*. London: Sage.
- Daniels, K., and A. Bailey (1999). "Strategy Development Processes and Participation in Decision Making: Predictors of Role Stressors and Job Satisfaction," *Journal of Applied Management Studies* 8(1), 27–42.
- Dess, G. G., G. T. Lumpkin, and J. G. Covin (1997). "Entrepreneurial Strategy Making and Firm Performance: Tests of Contingency and Configurational Models," *Strategic Management Journal* 18(9), 677–695.
- DeSarbo, W. S., C. A. Di Benedetto, M. Song, and I. Sinha (2005). "Revisiting the Miles and Snow Strategic Framework: Uncovering Interrelationships between Strategic Types, Capabilities, Environmental Uncertainty and Firm Performance," *Strategic Management Journal* 26(1), 47–74.
- Eisenhardt, K. M. (1989). "Making Fast Strategic Decisions in High-Velocity Environments," *Academy of Management Journal* 32(3), 543–576.
- Eisenhardt, K. M., and J. A. Martin (2000). "Dynamic Capabilities: What are they?," *Strategic Management Journal* 21(10–11), 1105–1121.
- Eppler, M. J., and K. W. Platts (2009). "The Systematic Use of Visualizing in the Strategic Planning Process," *Long Range Planning* 42(1), 42–74.
- Farjoun, M. (2002). "Toward an Organic Perspective on Strategy," *Strategic Management Journal* 23(7), 561–594.
- Floyd, S. W., and B. Wooldridge (1992). "Middle Management Involvement in Strategy and its Association with Strategic Type: A Research Note," *Strategic Management Journal* 13, 153–167.
- Frese, M., M. Van Gelderen, and M. Ombach (2000). "How to Plan as a Small Scale Business Owner: Psychological Process Characteristics of Action Strategies and Success," *Journal of Small Business Management* 38(2), 1–18.
- Frost, F. A. (2003). "The Use of Strategic Tools by Small and Medium Sized Enterprises: An Australian Study," *Strategic Change* 12, 49–62.
- Gibbons, P. T., and T. O'Connor (2005). "Influences on Strategic Planning Processes among Irish SMEs," *Journal of Small Business Management* 43(2), 170–186.
- Gilmore, T. N., and R. K. Kazanjian (1989). "Clarifying Decision Making in High-Growth Ventures: The Use of Responsibility Charting," *Journal of Business Venturing* 4(1), 69–83.
- Gray, C. (2004). "Management Development in European Small and Medium Enterprises," *Advances in Developing Human Resources* 6(4), 451–469.
- Green, K. M., J. G. Covin, and D. P. Slevin (2008). "Exploring the Relationship between Strategic Reactiveness and Entrepreneurial Orientation: The Role of Structure-Style Fit," *Journal of Business Venturing* 23, 356–383.
- Griffiths, W., and E. Webster (2010). "What Governs Firm-level R&D: Internal or External Factors?," *Technovation* 30(7–8), 471–481.

- Gupta, A. K., and V. Govindarajan (1984). "Business Unit Strategy, Managerial Characteristics, and Business Unit Effectiveness at Strategy Implementation," *Academy of Management Journal* 27(1), 25–41.
- Hart, S. L. (1991). "Intentionality and Autonomy in Strategy-Making Process: Modes, Archetypes, and Firm Performance," in *Advances in Strategic Management*, 7. Eds. P. Shrivastava, A. Huff, and J. Dutton. Greenwich, CT: JAI Press, 97–127.
- (1992). "An Integrative Framework for Strategy-Making Processes," *Academy of Management Review* 17(2), 327–351.
- Hart, S., and C. Banbury (1994). "How Strategy-Making Processes Can Make a Difference," *Strategic Management Journal* 15(4), 251–269.
- Hendry, J., and D. Seidl (2003). "The Structure and Significance of Strategic Episodes: Social Systems Theory and the Routine Practices of Strategic Change," *Journal of Management Studies* 40(1), 175–196.
- Hofstede, G. (2001). *Culture's Consequences: Comparing Values, Behaviors, Institutions, and Organizations across Nations*. Thousand Oaks: Sage Publications.
- House, R. J., P. J. Hanges, M. Javidan, P. W. Dorfman, and V. Gupta (2004). *Culture, Leadership, and Organizations: The GLOBE Study of 62 Societies*. Thousand Oaks: Sage Publications.
- Hutzschenreuter, T., and I. Kleindienst (2006). "Strategy-Process Research: What have we learned and what is still to be explored?," *Journal of Management* 32, 673–720.
- Jarzabkowski, P., J. Balogun, and D. Seidl (2007). "Strategizing: The Challenges of a Practice Perspective," *Human Relations* 60(1), 5–27.
- Jones, O., and A. Macpherson (2006). "Interorganizational Learning and Strategic Renewal in SMEs," *Long Range Planning* 39(2), 155–175.
- Khandwalla, P. N. (1976/77). "Some Top Management Styles, Their Context and Performance," *Organization and Administrative Sciences* 7(4), 21–51.
- Kim, T., and M. Rhee (2009). "Exploration and Exploitation: Internal Variety and Environmental Dynamism," *Strategic Organization* 7, 11–41.
- Kotey, B., and P. Slade (2005). "Formal Human Resource Management Practices in Small Growing Firms," *Journal of Small Business Management* 43(1), 16–40.
- Kraus, S., R. Harms, and E. J. Schwartz (2006). "Strategic Planning in Smaller Enterprises—New Empirical Findings," *Management Research News* 29(6), 334–344.
- Lebas, M., and K. Euske (2002). "A Conceptual and Operational Delineation of Performance," in *Business Performance Measurement: Theory and Practice*. Ed. A. Neely. Cambridge: Cambridge University Press.
- Li, W., R. Veliyath, and J. Tan (2013). "Network characteristics and firm performance: An examination of the relationships in the context of a cluster," *Journal of Small Business Management* 51(1), 1–22.
- Lieberman-Yaconi, L., T. Hooper, and K. Hutchings (2010). "Toward a Model of Understanding Strategic Decision-Making in Micro-Firms: Exploring the Australian Information Technology Sector," *Journal of Small Business Management* 48(1), 70–95.
- Liesch, P. W., L. S. Welch, and P. J. Buckley (2011). "Risk and Uncertainty in Internationalisation and International Entrepreneurship Studies: Review and Conceptual Development," *Management International Review* 51(6), 851–873. Focused Issue: 50 Years of Management International Review.
- Lumpkin, G. T., and G. G. Dess (1996). "Clarifying the Entrepreneurial Orientation Construct and Linking it to Performance," *The Academy of Management Review* 21(1), 135–154.
- (2006). "The Effect of Simplicity on the Strategy-Performance Relationship: A Note," *Journal of Management Studies* 43(7), 1583–1604.
- Lyon, D. W., G. T. Lumpkin, and G. G. Dess (2000). "Enhancing Entrepreneurial Orientation Research: Operationalizing and Measuring a Key Strategic Decision Making Process," *Journal of Management* 26(5), 1055–1085.
- McGee, J. E., and O. O. Sawyerr (2003). "Uncertainty and Information Search Activities: A Study of Owner-Managers of Small High-Technology Manufacturing Firm," *Journal of Small Business Management* 41(4), 385–401.
- McGregor, J., and C. Gomes (1999). "Technology Uptake in Small and Medium-Sized Enterprises: Some Evidence from New Zealand," *Journal of Small Business Management* 37(3), 94–102.

- Massey, C. (2011). *Managing the Small Firm in New Zealand*, 2nd ed. Auckland, New Zealand: Pearson.
- Matthews, C. H., and S. G. Scott (1995). "Uncertainty and Planning in Small and Entrepreneurial Firms: An Empirical Assessment," *Journal of Small Business Management* 33(4), 34–52.
- Miles, M. P., L. Munilla, and J. Darroch (2006). "The Role of Strategic Conversations with Stakeholders in the Formation of Corporate Social Responsibility Strategy," *Journal of Business Ethics* 69, 195–205.
- Miles, R. E., and C. C. Snow (1978). *Organizational, Strategy, Structure, and Process*. New York: McGraw Hill.
- Miller, C. C., and L. B. Cardinal (1994). "Strategic Planning and Firm Performance: A Synthesis of more than Two Decades of Research," *Academy of Management Journal* 37(6), 1649–1665.
- Miller, D. (1982). "Innovation in Conservative and Entrepreneurial Firms: Two Models of Strategic Momentum," *Strategic Management Journal* 3, 1–25.
- (1983). "The Correlates of Entrepreneurship in Three Types of Firms," *Management Science* 29(7), 770–791.
- (1993). "The Architecture of Simplicity," *Academy of Management Review* 18(1), 116–138.
- Miller, D., and P. H. Friesen (1977). "Strategy Making in Context: Ten Empirical Archetypes," *Journal of Management Studies* 14, 253–279.
- (1978). "Archetypes of Strategy Formulation," *Management Science* 24(9), 921–933.
- (1984). *Organizations: A Quantum View*. Englewood Cliffs, NJ: Prentice Hall.
- Mintzberg, H. (1973). "Strategy-Making in Three Modes," *California Management Review* 6(2), 44–53.
- (1978). "Patterns in Strategy Formation," *Management Science* 24(9), 934–948.
- (1990). "Strategy Formulation: Schools of Thought," in *Perspectives on Strategic Management*. Ed. J. W. Fredrickson. New York: Harper & Row, 105–235.
- Mintzberg, H., and J. A. Waters (1985). "Of Strategies, Deliberate and Emergent," *Strategic Management Journal* 6, 257–272.
- Moreno, A. M., and J. C. Casillas (2008). "Entrepreneurial Orientation and Growth of SMEs: A Causal Model," *Entrepreneurship: Theory and Practice* 32(3), 507–528.
- Morrison, A. (1999). "Small Business in New Zealand," *Parliamentary Library Background Paper No. 21*.
- Neubaum, D. O., M. S. Mitchell, and M. Schminke (2004). "Firm Newness, Entrepreneurial Orientation, and Ethical Climate," *Journal of Business Ethics* 52(4), 334–347.
- New Zealand Bureau of Statistics (2007). *New Zealand Business Demography Statistics*. Statistics New Zealand. <http://www.stats.govt.nz>.
- Nutt, P. C. (1981). "Some Guides for the Selection of a Decision-Making Strategy," *Technological Forecasting and Social Change* 19, 133–145.
- (2001). "Strategic Decision-Making," in *The Blackwell Handbook of Strategic Management*. Eds. M. A. Hitt, R. E. Freeman, and J. S. Harrison. Oxford: Blackwell, 35–49.
- Ogunmokun, G. O., R. N. Shaw, and P. T. FitzRoy (1999). "Determinants of Strategic Planning Behaviour in Small Business: An Exploratory Investigation of Small Business Organizations in Australia," *International Journal of Management* 16(2), 190–202.
- O'Regan, N., and A. Ghobadian (2004). "Testing the Homogeneity of SMEs: The Impact of Size on Managerial and Organisational Processes," *European Business Review* 16(1), 64–79.
- Parnell, J. A., and W. Crandall (2001). "Rethinking Participative Decision Making: A Refinement of the Propensity for Participative Decision Making Scale," *Personnel Review* 30(5), 523–535.
- Priem, R. L., A. M. A. Rasheed, and A. G. Kotulic (1995). "Rationality in Strategic Decision Processes, Environmental Dynamism and Firm Performance," *Journal of Management* 21(5), 913–929.
- Robinson, R. B. (1982). "The Importance of 'Outsiders' in Small Firm Strategic Planning," *Academy of Management Journal* 25(1), 80–93.
- Runyan, R., C. Droge, and J. Swinney (2008). "Entrepreneurial Orientation versus Small Business Orientation: What are their Relationships to Firm Performance?," *Journal of Small Business Management* 46(4), 576–588.
- Sarasvathy, S. (2001). "Causation and Effectuation: Toward a Theoretical Shift from Economic Inevitability to Entrepreneurial Contingency," *The Academy of Management Review* 26(2), 243–264.

- Schwenk, C. B., and C. B. Shrader (1993). "Effects of Formal Strategic Planning on Financial Performance in Small Firms: A Meta-Analysis," *Entrepreneurship: Theory and Practice* 17(3), 53–64.
- Shrivastava, P., and J. H. Grant (1985). "Empirically Derived Models of Strategic Decision-Making Processes," *Strategic Management Journal* 6(2), 97–113.
- Siemsen, E., A. Roth, and P. Oliveira (2010). "Common Method Bias in Regression Models with Linear, Quadratic, and Interaction Effects," *Organizational Research Methods* 13(3), 456–476.
- Teece, D. Y., and G. Pisano (1994). "The Dynamic Capabilities of Firms: An Introduction," *Industrial Corporate Change* 3(3), 537–556.
- Tourish, D. (2005). "Critical Upward Communication: Ten Commandments for Improving Strategy and Decision Making," *Long Range Planning* 38(5), 485–503.
- Van Gelderen, M., M. Frese, and R. Thurik (2000). "Strategies, Uncertainty and Performance of Small Business Start-Ups," *Small Business Economics* 15(3), 165–181.
- Verreynne, M. (2006). "Strategy-Making Process and Firm Performance in Small Firms," *Journal of Management and Organization* 12(3), 209–222.
- Verreynne, M., and D. Meyer (2010). "Making Strategy at Different Stages of the Industry Life Cycle—Relationships with Small Firm Performance," *Small Business Economics* 35(4), 399–416.
- Voss, Z. G., G. B. Voss, and C. Moorman (2005). "An Empirical Examination of the Complex Relationships between Entrepreneurial Orientation and Stakeholder Support," *European Journal of Marketing* 39(9/10), 1132–1222.
- Whittington, R. (2006). "Completing the Practice Turn in Strategy Research," *Organization Studies* 27(5), 613–634.
- Whittington, R., and L. Cailluet (2008). "The Crafts of Strategy," *Long Range Planning* 41(3), 241–247.
- Wiklund, J., and D. Shepherd (2003). "Knowledge-Based Resources, Entrepreneurial Orientation, and the Performance of Small and Medium-Sized Businesses," *Strategic Management Journal* 24(13), 1307–1314.
- (2005). "Entrepreneurial Orientation and Small Business Performance: A Configurational Approach," *Journal of Business Venturing* 20, 71–91.
- Winter, S. G. (2003). "Understanding Dynamic Capabilities," *Strategic Management Journal* 24(10), 991–995.
- Wooldridge, B., and S. W. Floyd (1990). "The Strategy Process, Middle Management Involvement, and Organizational Performance," *Strategic Management Journal* 11(3), 231–241.
- Zahra, S. A. (1993). "Environment, Corporate Entrepreneurship and Company Performance: A Taxonomic Approach," *Journal of Business Venturing* 8(4), 319–340.

The Impact of Social Networks on Perceptions of International Opportunities

by Witold Nowiński and Alex Rialp

The paper emphasizes the importance of social networks in the gestation of international new ventures, particularly through their impact on the perceptions of nascent entrepreneurs. Their contribution consists not only in providing new information to assist new venture founders in identifying international opportunities but, and perhaps more importantly, in assessing them. By modifying the way in which entrepreneurs perceive the feasibility and desirability of opportunities, networks trigger the enactment of international opportunities. Whereas opportunity evaluations by more experienced international entrepreneurs tend to be linked to their strong network ties, the international role models of novice entrepreneurs seem to be transformational.

Introduction

Although a widely accepted definition of international entrepreneurship refers to “the discovery, enactment, evaluation, and exploitation of opportunities across national borders” (Oviatt and McDougall 2005, p. 540), prior research has paid relatively little attention to the enactment and evaluation of international business opportunities. These opportunities are frequently exploited in highly uncertain environments, which are relatively difficult to predict and control compared with local environments. It would be therefore interesting to see how entrepreneurs actually decide to venture internationally. One theoretical path for explaining this process might be effectuation theory (Evers and O’Gorman 2011; Sarasvathy 2001). As seen in effectuation logic, entrepreneurs tend to start out by assessing their

capacities. They subsequently embark on the entrepreneurial process by leveraging their networks and contingencies, which may lead them to various conclusions, one of them being to go international. Effectuation logic assumes also that entrepreneurs need not view internationalization as their primary objective. Instead, they may choose to enter international markets as long as this turns out to be their optimal growth pattern given their network ties and the contingencies they encounter. However, recent empirical findings question some of the implicit assumptions of effectuation logic, such as the willingness of entrepreneurs to act in the face of outcomes that are uncertain and hard to evaluate (McKelvie, Haynie, and Gustavsson 2011). The findings therefore call for further research into entrepreneurs’ decision-making patterns in circumstances of great uncertainty, such as those involving early internationalization.

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This paper is intended to contribute to the understanding of such a pattern by examining the role that social networks play in the way new venture founders assess international business opportunities and the effects such networks have on the founders' perceptions of international opportunities. The role of networks in new venture internationalization has received a great deal of attention, focused primarily on how international opportunities are discovered and eventually exploited (Chandra, Styles, and Wilkinson 2009; Nordman and Melén 2008; Oviatt and McDougall 2005) rather than the way they are evaluated. Research has also shown that the cognitive processes that determine the perceptions of market opportunities are a crucial factor in decisions to pursue such opportunities (Edelman and Yli-Renko 2010). Yet the authors know little about the role of entrepreneurs' cognitive processes in evaluating and exploiting international opportunities (De Clercq et al. 2012). It is therefore critical to understand whether and perhaps how networks affect entrepreneurs' perceptions of international market opportunities, that is, their judgments under conditions of high uncertainty such as those normally associated with international entrepreneurial activity (Butler, Doktor, and Lins 2010). It is therefore of interest to examine how entrepreneurs move from third-person opportunities in international markets to action, or first-person opportunities (McMullen and Shepherd 2006). It has been argued recently (Dimov 2010) that perceptions of market opportunities and the resulting pursuance of such opportunities are affected by the self-efficacy of start-up founders. Motivation, which encompasses the perceptions of feasibility and desirability, is also regarded as an important determinant of entrepreneurial action (Carsrud and Brännback, 2011). Therefore, focus in this study has been placed on the way in which social networks (including role models) interact with feasibility as well as the desirability perceptions determining international opportunities perceptions and consequently their enactment.

In the following sections of this paper, an overview has been provided of prior research into the role of networks in the creation of new ventures and internationalization. Additionally, a review has been conducted of the past research pertaining to opportunity evaluation and to various approaches to entrepreneurship as adopted by experienced as well as novice

entrepreneurs. This is followed by a description of the case-based methodology employed in this study, as well as a presentation of case findings arrived at by within-case and cross-case analysis. Finally, the findings are discussed in the context of previous research and propositions are offered concerning the relevant role of networks in the internationalization of new ventures.

Role of Networks in New Venture Formation

Networks help entrepreneurs access valuable resources (Aldrich 1999; Greve 1995) that are otherwise unavailable to them mostly because of their cost. Networks may enable entrepreneurs to gain access to such resources as financing, information, and motivation (Elfring and Hulsink 2003; Jenssen and Koenig 2002; Johansson 1988; Shane and Cable 2002). They can also impart legitimacy on new ventures (Elfring and Hulsink 2003).

Networking frequently precedes new venture formation. Its impact on new venture creation may start with contributing to the discovery of opportunities (Elfring and Hulsink 2003). Social capital facilitates access to resources consequently increasing the probability that opportunities will be pursued (Aldrich and Zimmer 1986). However, networks may contribute to the formation of new ventures not only by providing access to resources but also by affecting entrepreneurs' cognitions. De Carolis and Saporito (2006) argue that social capital affects entrepreneurs' cognition as it obscures their perception of risks, consequently increasing the likelihood they will choose to pursue business opportunities. Changed cognitions and self-efficacy boost results from new information about a particular sector that an individual receives through networks (Ozgen and Baron 2007).

Networks are seen as dynamic and evolving from the moment entrepreneurs conceive a business idea, then form a new venture (Larson and Starr 1993) and develop it from the moment of establishment (Hite and Hesterly 2001). Different types of network ties may be beneficial at different stages of new venture development, with entrepreneurs moving from strong path-dependent ties characterized by high levels of cohesion toward looser arm's-length ties based on socioeconomic exchanges (Hite and Hesterly 2001; Larson and Starr 1993).

According to Sequira, Mueller, and McGee (2007), strong ties may offer emotional support and influence entrepreneurial intentions, thus improving the chances of new venture formation. Weak ties, in their turn, are a source of new knowledge as they allow entrepreneurs to access more diverse knowledge sources than strong ties usually do. Such broader knowledge is thought to contribute to the discovery of international opportunities (Chandra, Styles, and Wilkinson 2009).

Opportunity recognition has been linked to various sources of social ties, such as industry networks, mentors, and professional forums (Ozgen and Baron 2007). The decision to form a new venture has also been attributed to the influence of networks and peer groups, which constitute a source of role models (Bosma et al. 2012). Role models may be important for new venture development because of their impact on entrepreneurial cognitions. In the context of academic entrepreneurship, Vohora, Wright, and Lockett (2004) find that nascent academic entrepreneurs encounter problems with transitioning from opportunity recognition toward new venture commitment (which is the next phase of spin-off creation), because of the lack of contacts with the business community and the lack of successful role models. The need for role models may be linked to the impact that the perceived desirability and feasibility of opportunities has on entrepreneurial intentions (Krueger and Brazeal 1994). Research shows that the presence of such role models, who in most cases are either entrepreneurs or parents, increases the chances that one will choose to establish oneself in business (Delmar and Davidsson 2000; Scherer et al. 1989). A recent study by Bosma et al. (2012) indicates that role models tend to be found not only in families but also in broader personal networks that may involve former employers, former colleagues, professional contacts, and personal relations.

The Role of Networks in Internationalization

According to a recently modified version of the Uppsala model (Johanson and Vahlne 2009), knowledge related to the network position of a firm, which encompasses the awareness of opportunities, forms the starting point and a springboard for internationalization. Networks are also viewed as moderating the speed of this internationalization (Oviatt

and McDougall 2005). Networks contribute to the discovery of international opportunities (Chandra, Styles, and Wilkinson 2009; Ellis 2000). These may be identified through existing contacts, as is often the case with high-tech firms (Coviello and Munro 1995, 1997) or may be attributed to new links, as for example in the case of family businesses that derive opportunities from new ties established during trade fairs (Kontinen and Ojala 2011). Network-assisted recognition of international opportunities might explain the early and fast internationalizations of certain firms, known also as born-globals/international new ventures (INVs). Such firms display a high capability to network, which they regard as one of their strategic aims (Mort and Weerawardena 2006).

Researchers seem to agree that the internationalization of INVs is driven by learning through networks (Lindstrand, Eriksson, and Sharma 2009; Prashantham and Dhanaraj 2010; Sharma and Blomstermo 2003). Individual studies stress various aspects of this process. Some postulate that weak ties are more useful than strong ties in supporting the acquisition of knowledge from inter-organizational networks (Presutti, Boari, and Fratocchi 2007; Sharma and Blomstermo 2003). Others indicate that social capital, represented by both intra and inter-organizational ties, enhances absorptive capacity, consequently increasing the knowledge of markets and technologies (Prashantham and Young 2011). Still, others analyze contradictory explanations of learning through networks and stress either the role of conscious decisions to use networks for learning about international market opportunities (Prashantham and Dhanaraj 2010) or the role of serendipity in developing network ties (Sharma and Blomstermo 2003). In this context, a number of studies refer to serendipity in the internationalization process, which proceeds through forming accidental network ties that lead to subsequent business (Crick and Spence 2005; Meyer and Skak 2002; Vasilchenko and Morrish 2011). Such serendipitous encounters generate social capital that may subsequently evolve into more formalized relations generating credibility, access to knowledge, and customers (Vasilchenko and Morrish 2011). In conclusion, networks have been perceived as facilitating both the recognition of international market opportunities and their subsequent exploitation.

Cognitive Approach to International Opportunities

Zahra, Korri, and JiFeng (2005) recommend applying a cognitive lens in the study of international entrepreneurship in order to understand the mental models and sense making that international entrepreneurs apply. They also point to the fact that “International opportunity recognition is an iterative process, where the entrepreneur revises her (his) concept several times.” In a similar vein, according to Chandra, Styles, and Wilkinson (2012), international opportunity development is a process driven by past experience and actions. The industry context and networks affect the speed of opportunity development. This line of thinking about opportunity as a process is also developed by Renko, Shrader, and Simon (2012). For the purposes of this study, opportunities were modeled as objective and subjective phenomena in which subjectively perceived opportunities are formed in a process where action feeds back to perceptions of market needs and means to satisfy them. McMullen and Shepherd (2006) suggest that opportunity development may proceed in the two stages of attention and evaluation. In the first stage, *a priori* knowledge and motivation for opportunity alertness precede the perception of third-person opportunity, that is, opportunity perceived as viable for someone who is out in the market but not necessarily for the perceiving individual. The entrepreneur goes through a subsequent evaluation stage eventually to take action (first-person opportunity) as long as he or she has assessed such an opportunity as feasible and desirable. De Jong (2013) links decisions to exploit innovation-related opportunities with entrepreneurs’ perceived control (compatible with entrepreneurial self-efficacy), subjective norms (social pressure to take specific action), and in certain cases with attitude (compatible with desirability). Thus, the cognitive approach implies a substantial role not only of identification but also of the evaluation of opportunities and the subsequent action.

The ability to identify the relationship between the means and ends necessary to recognize opportunities (Shane and Venkataraman 2000) may be affected by an entrepreneur’s experience and networks (Chandra, Styles, and Wilkinson 2012). On the one hand, novice and experienced entrepreneurs differ in the cognitive patterns they display in identifying and evaluating opportunities (Baron and Ensley

2006) with more experienced entrepreneurs using more clearly defined and richer cognitive frameworks. On the other hand, experience may blind entrepreneurs to new, unexpected opportunities (Zahra, Korri, and JiFeng 2005). Nevertheless, an overwhelming body of research supports the positive role of experience in new venture creation and internationalization. Prior entrepreneurial experience contributes to reaching the start-up phase in the course of new venture gestation (Rotefoss and Kolvareid 2005). This may be explained by linking entrepreneurial experience with positive perceptions of the feasibility and desirability of new ventures (Krueger 1993). Similarly, the positive impact of entrepreneurial experience on the emergence of new ventures is mediated by its influence on confidence in a business opportunity (Dimov 2010). Such experience also affects networking behavior. Portfolio entrepreneurs tend to interact more with the external environment (Alsos and Kolvareid 1998), whereas experienced entrepreneurs generally have a greater ability to create social capital than novice entrepreneurs (Mosey and Wright 2007). Thus, prior entrepreneurial experience affects new ventures by, among others, impacting entrepreneurs’ cognitive schemes. Similarly, research on INVs has provided either theoretical arguments for (Jones and Coviello 2005) or empirical evidence that (Andersson and Wictor 2003; Crick and Jones 2000; Madsen and Servais 1997; McDougall, Oviatt, and Shrader 2003; Oviatt and McDougall 1997; Zucchella, Palamara, and Denicolai 2007) international business experience is a driver for international orientation and early internationalization.

In view of the arguments mentioned earlier, it is clear that novice entrepreneurs without prior international business experience encounter substantial challenges in forming and subsequently enacting positive perceptions of international opportunities. Furthermore, the perceptions of opportunities are negatively correlated with the dynamism of the environment (Edelman and Yli-Renko 2010), suggesting that insufficient control over the environment might discourage entrepreneurs from establishing new ventures. Positive perceptions of international opportunities may therefore be crucial for their enactment.

This literature review provides several important insights pertinent for the analysis carried out in this study. Networks are capable

not only of supplying resources but also of modifying the perceptions and mental models of nascent entrepreneurs. Impact on entrepreneurial cognitions may be rooted in the perceptions of risk and/or uncertainty and in confidence in opportunities. Less experienced entrepreneurs are less likely to benefit from networks. When available, role models help novice entrepreneurs form new ventures by facilitating their transition from opportunity recognition to opportunity commitment or exploitation.

Hence, on the basis of this review of literature, we ask how networks affect the perceptions of international opportunities by entrepreneurs who vary in their prior international business experience.

Methodology

The study has been designed to provide insights into the way in which networks affect the evaluation of international opportunities. Though the role of networks in promoting resource accumulation as well as enabling market access has been generally acknowledged by international entrepreneurship scholars, such a role has never been studied in the context of the perceptions of international opportunities. The case study method has several advantages over other approaches. By examining specific cases of the incubation of INVs, one can assess opportunity perceptions in a specific context. It would be significantly more difficult to collect detailed information on incubation by means other than the case study. Furthermore, open-ended questions have allowed the interviewed entrepreneurs not only to enumerate particular network ties but also to evaluate their relevance. Lastly, the case study method is specifically recommended in research intended to address "how and why" questions (Yin 2003, p. 5). For the reasons mentioned earlier, the approach has been found to be appropriate for answering the aforementioned research question concerning the transition from third-person to first-person perceptions of international opportunities and the role of networks in this process.

The founders of INVs have been chosen to serve as the object of the study. As explained earlier, nascent entrepreneurs are expected to face particularly huge uncertainties the moment they move into international markets. This makes evaluations performed in the course of

opportunity development all the more relevant. A number of cases have been selected from a larger sample of Polish small and medium-sized enterprises (SMEs) (and their founders) whose early international activity was examined. This larger sample, consisting of founders of 12 INVs, was drawn deliberately on the basis of media reports and a questionnaire survey of Polish exporter SMEs. Four of these 12 INVs, which fulfilled the following three selection criteria, were selected. Firstly, internationalization was expected to be precocious: all four companies founded by the selected entrepreneurs maintained international operations from the very moment of their official formation. Secondly, the entrepreneurs were to vary in their international business experience at the time they evaluated their opportunity. Two of the selected founders had prior international business experience, one being a portfolio entrepreneur and the other a serial entrepreneur, whereas the founders of the other two ventures were both novice entrepreneurs with no prior business experience of any kind (meaning they had no international business experience). Last but not least, the choice of entrepreneurs for the study was influenced by the availability of information on their incubation, which was crucial for analyzing the evaluations they made. To sum up, whereas all of the selected founders were alike in having internationalized their businesses from their very inception, they differed in the degree of their international business experience. The earlier discussion shows that theoretical replication was applied by confronting experienced and novice entrepreneurs and that use was made of literal replication within both groups. Each of the selected entrepreneurs was personally interviewed in 2008 or 2009. Each interview lasted between 60 and 120 minutes. Part of this time was devoted to questions regarding the incubation period whereas the remaining time was spent on their international activities. The interviews were loosely structured. To gain insights into the evaluation of opportunities and the context in which the entrepreneurs performed it, they were asked a number of questions on the origins of their companies, their past experience, the incubation process, and the network ties used for the incubation and internationalization. The interviews were recorded and subsequently transcribed. Additional information concerning the new ventures was collected through Internet research. Short

Table 1
Summary of Data on Surveyed Entrepreneurs and Their Networks

	Toy	Opti	Tele	Milki
Industry	Toys	Hi-tech/R&D ^a	Hi-tech/R&D	Milk products
Age of the Founder (At Founding)	30–40	Over 40	Over 30	35
Prior Entrepreneurial Experience	None	None	Three years as owner of small consulting company	Five years as co-owner of multiproduct manufacturer
Prior Industry Experience	Limited to hobby	Limited to academic research	Three years	None
Gestation Period	Ca. five years	Ca. four years	At least one year	Several months

^aR&D, research and development.
Source: Case studies.

descriptions of the case studies are included in the following section (see Table 1 for summary of case data). For the sake of confidentiality, the actual names of the companies in question have been disguised.

To answer the research question, the interview material was analyzed with reference to the feasibility and desirability of opportunities, network ties, role models, and internationalization. Network ties were defined as connecting a set of actors, with strong network ties assumed to entail relatively close relationships characterized, among others, by high levels of trust stemming from, for example, frequent interaction, and weak ties characterized by relatively less frequent interaction (Jack 2005). The feasibility of perceptions was defined as entrepreneurs' perception of their ability to successfully exploit a given opportunity. By the same token, the perception of desirability was defined as the entrepreneurs' perception of the benefits they expected to derive from pursuing the opportunity. Role models were defined as recognized individuals whose entrepreneurial behavior inspires nascent entrepreneurs to act upon a perceived (third-person) opportunity. Lastly, internationalization is defined as referring to the international operations undertaken by a formally incorporated venture. In fact, internationalization might occur after, upon as well as prior to the formal incorporation.

The Cases

Toy

Toy was founded by two colleagues in 2005. The idea originated amidst the founders' interest in modeling and role playing games (RPG): one of them was particularly interested in and knowledgeable about modeling whereas the other contributed a stronger RPG background. The partners came up with the idea of making money on RPG gaming accessories approximately five years before the actual start-up emerged. The founders needed that time to develop sufficient confidence in their entrepreneurial capabilities. Their contact with a successful Polish immigrant businessman turned out to have a crucial impact on their perceptions of the new venture and the feasibility of internationalizing the business. Having committed to develop the new venture, the partners nevertheless needed several years to reach the start-up phase. During this time, they cooperated with people who complemented their deficient business competencies.

Opti

Opti was founded by a university professor who specialized in optoelectronic measurement. He first came up with the idea to implement his research findings during his postdoctoral stay in South Korea where he observed new ventures being created by local researchers and technicians. The professor had

no prior business experience whether personal or through family or close friends. This is why his decision to engage in international commercial activities was influenced by the example of researchers who succeeded in establishing INVs. Opti's founder made several attempts to commercialize his research knowledge through existing Polish and international companies before he decided to create his own venture developing and manufacturing optoelectronic measurement devices. He took four years or so to transit from his initial idea to commercialize his knowledge (in ca. 1998) to the start-up phase of his business.

Tele

Tele is an independent provider of repair services for mobile telecommunication base station equipment. The company was founded by a team of four colleagues and engineers who developed proprietary software for the efficient delivery of such services. The leading entrepreneur who conceived and promoted the idea had started another small firm in the field of mobile telecommunication consulting prior to the establishment of Tele. By relying on a network of business ties with the mobile telecommunication industry derived from his other firm, he managed to find their first key account, triggering the official launch of the venture. Strong bonds based on mutual trust between the co-owners turned out to be crucial in the incubation period in the face of severe resource constraints and great uncertainty surrounding the innovative value of the services to be offered. These ties facilitated a transition from third-person to first-person opportunity and eventually led to capturing the opportunity.

Milki

Milki was established by two entrepreneurs. The leading entrepreneur had prior business experience as a co-owner of a small manufacturing company spread over such diverse fields as home appliances and cemetery candles. The idea was originally conceived during a business trip to Russia during which a Polish food company businessman strongly recommended that he start trading in casein. With his previous business in a down cycle, the entrepreneur decided to explore the possibilities of entering into the new field. With the help of a former Polish dairy sector manager, he got to understand the industry, its technologies, and the growth opportunities. Once he was convinced

that the opportunity was real, the leading founder exited the previous company and set up an international casein trading business, which he later expanded into other dairy products.

Cross-Case Analysis

All of the selected entrepreneurs used their networks during the incubation phase. The networks were both domestic and international. Each of the firms in question underwent an incubation period that lasted from one to several years. The duration of the incubation period was inversely proportional to their prior business experience. The novice/nascent entrepreneurs could be regarded as accidental entrepreneurs whereas the more experienced ones as inevitable entrepreneurs (as defined by Fitzsimmons and Douglas 2011). For the purposes of this study, account was taken of the feasibility and desirability of perceptions as well as network ties. For a summary of the findings, see Table 2.

Whereas network connections were observed to have had some effect on all entrepreneurs, the more experienced of them relied on strong ties of highly reliable acquaintances who either shared their knowledge about the industry in which the entrepreneur intended to operate (Milki) or contributed their time and knowledge to projects that eventually transformed into new ventures with such entrepreneurs holding a share of the stock (Tele).

Milki's founder: My contacts with the manager of this cooperative group . . . he was something of a mentor to me. They made a difference. Not that he would direct me but I did use his knowledge about the casein industry, mainly about the making of casein products, the applications, the behaviour . . . So I used his occasional friendly advice . . .

This knowledge complemented the entrepreneur's earlier experience as importer from East European countries. The third-person opportunity to act as a middle man between Eastern European suppliers of milk products and Western buyers was no secret: it was in fact common knowledge in the industry. However, whereas Western companies saw the former Soviet Union as "the wild East," the founder of Milki was capable of spotting and taking advantage of the first-person opportunity of

Table 2
Network Ties Affecting Perceptions Feasibility and Desirability of Surveyed Entrepreneurs

Weak Ties/Role Models		Strong Ties	
Ties Affecting Feasibility Perceptions	Ties Affecting Desirability Perceptions	Ties Affecting Feasibility Perceptions	Ties Affecting Desirability Perceptions
Tele		Cooperation with four other colleagues and shareholders	
Milki		Retired executive from milk production facility	
Toy	Serendipitous acquaintance with Polish immigrant based in United Kingdom and later also United States active in model-making business First international customers gained on eBay	Serendipitous acquaintance with Polish immigrant based in United Kingdom and later also United States active in model-making business First international customers gained on eBay	Colleague from local shop Cooperation with the other cofounder
Opti	Acquaintance with Korean researchers who started spin-off firms	Acquaintance with Korean researchers who started spin-off firms and with Israeli researcher-entrepreneur	

Source: Case studies.

becoming an intermediary, thanks to a combination of his prior importer experience, his knowledge of the industry, and his willingness to take on a challenge.

As for Tele, the key network connections of its leading founder were former fellow students from his university who became his business partners. The initial business idea was conceived by the leading founder who used his industry experience. He realized, however, that he had neither sufficient knowledge nor the resources to pursue the idea on his own. As the business concept was very innovative and novel and as, at the time (around 2002), seed

and venture capital was only in its infancy in Poland, such a new venture had little hopes of securing external financing. Therefore, the involvement of colleagues, who contributed complementary skills and knowledge and were prepared to invest their time, was instrumental in transitioning from third-person to first-person perception of this opportunity.

Tele's leading founder: I needed professionals to help me pursue this idea. I found such (people)—I did not actually need to look for them as I was in touch with them already. They were my tech-

nical university colleagues who all pursued their different careers after their graduation . . . (acquiring a range of knowledge between them) . . . that was what the venture required: broad knowledge of electronics, IT, microwaves and radio waves. The company came into existence after all the knowledge needed to perform the specialist services had been put together.

We began discussing the company seriously in the early 2003. These were very intense talks, I would sit down with my colleagues and present my ideas [. . .]. We needed specific software which was not available on market [. . .]. Having to write it ourselves delayed the launch of our business . . .

The crucial role of these strong ties with founding colleagues consisted not only in knowledge that they provided but also in trust that was crucial particularly in the incubation phase.

Tele's leading founder: (This private dimension of ties) was very important. I still believe that it was among most important (aspects). First of all trust, there has to be full mutual trust in the beginning among co-owners who form the company . . . (the fact) that I knew, we knew each other, probably prevailed upon the venture start-up. These private contacts were crucial. We knew each other not for a year but for a few years and each one knew what to expect from the others . . .

Tele's founder also used his other network ties from his consultancy to facilitate Tele's initial search for customers.

Tele's leading founder: I had business connections [. . .] as I had done business with the various mobile telecommunication firms. I approached and offered our services to them. I had a good reputation as a reliable company after a few years in the business: they knew me . . . they could see I did not appear out of the blue [. . .] I initially relied on such connections . . . and only later engaged in more professional marketing activities . . .

To sum up, the two entrepreneurs who had prior (international) business experience had no misgivings about the desirability of the opportunity they faced. They did, however, use their strong network ties to build a positive perception of the feasibility of their ventures. This concerned mainly the technical knowledge necessary to provide competitive products and/or services.

The networks of the two inexperienced founders also provided them with market and business knowledge helping them to see their opportunities as more feasible and desirable. The network ties that affected these perceptions were predominantly weak but included some strong ones as well. The founders of Toy started out by occasionally selling products, which they had initially devised for their own enjoyment. It was their own interest in such products as well as positive feedback from eBay customers that influenced their initial perceptions of the third-person opportunity. However, having no business experience, they lingered in a hobby operation for several years. What finally inspired them to go beyond the third-person perception and fully embrace the opportunity was one of the founder's somewhat serendipitous encounter with a Polish immigrant entrepreneur who had started his first business in the United Kingdom and later moved into the United States. This person took an interest in the model-making achievements of the Toy cofounder, which convinced him to invite the latter to the United Kingdom. On this occasion, he showed the Toy cofounder the model-making industry. This eye-opening experience finally convinced the Toy founders to take their hobby handicraft more seriously, note its exciting prospects (desirability perceptions), and favorably assess their own capabilities as compared with those of other market participants (feasibility perceptions).

One of the Toy founders said: The Pole, who now lives in the US [. . .] and owns a very big [modelling] business, wanted to see how I could make my models without any [resource] base . . . so I went to the UK on what was in fact a month-long vacation and ended up having him show me that what I was doing could just as well generate a profit. He showed me eBay, he showed me this trade fair, he showed me the whole industry and I said to myself: why not. So I came back

here really excited and started selling the idea to others . . .

And, as reported by the other co-owner:

One of the Toy founders said: [. . .] G. went to this trade fair . . . and brought back a video which we all watched and which made us realize that, contrary to [our] expectations, they did not do things better than us . . . and were able to sell their models for good prices, and we said “wow, we are not worse than them.” This was a real breakthrough . . .

The other ties that played a role in evaluating the opportunity could be characterized as strong. They included their mutual trust-based relationship as well as the emotional support of a shop-owner friend. When they first began to develop their idea, the two Toy founders worked together with several other hobbyists with whom they created and occasionally sold toy models. They had also worked for a year with two other people who would later become their business partners. Though these relationships provided complementary skills and knowledge, they did not have a significant impact on the perceptions of the opportunity.

The general pattern observed in the Toy founders was replicated by the university professor who founded Opti as his first business venture. The move from pure science to business applications was a long process. Opti's founder began as a scholar who was not fully satisfied with his research projects, which ended with prototype development never to be followed up by actual implementation. The problem could be attributed to pressures on the professor to continually take on new projects so as to acquire new research grants as well as the lack of interest on the part of the Polish industry which, at that time, had little interest in niche projects that required doing business outside of Poland. The key turning point for the Opti founder was his postdoctoral stay in South Korea and his realization that “things were not as described [in Polish media], it was not that money gave them the strength to develop at this pace and that the money came from America . . .” (interview with Opti's founder). He observed that Korean researcher-entrepreneurs managed to succeed without a strong financial backing and that they would invariably set out on developing their products

and creating their new ventures with a level of knowledge that did not exceed his own.

Opti's founder: They showed me their working conditions, the old shabby buildings in which they worked . . . two years later, although their thermal camera project turned out to have failed, they succeeded with their ultrasonography venture. I saw also that they were not that good at all—on the contrary, they were still in their infancy in many fields . . .

What was important to his perceptions of business development was his realization that persistence over a certain time brought success.

Opti's founder: When I left, they had little chance of success, the optics did not work, there was an explosion and the electronic circuits hummed—but with hard work [. . .] by the time the product was unveiled a few months later, everything came together and a further year down the road they were happy to see their equipment in full production.

The citations just described show how Opti's founder's feasibility perceptions evolved and what influenced them. Exposure to Korean researcher-entrepreneurs made him realize that one does not have to have a big business to put research ideas into business practice and that the goal could well be achieved by a money-strapped researcher-entrepreneur. An additional boost to his motivation came from a serendipitous encounter at a scientific congress with an Israeli researcher-entrepreneur who became his inspiration and a role model.

Opti's founder: This person made an overwhelming impression on me, a powerful impression indeed—he was more than a salesperson, he had technical knowledge and was a former researcher . . . his technical knowledge exceeded anything I knew because he combined practical hands-on knowledge with the theory. He told me that his markets were in the US as well as China, India and various other Asian countries. This impressed me so much I decided I would really like to be like him . . .

Opti's road toward the start-up phase included other contacts, which eventually brought about the final decision. One of them was with a German research institute with which the would-be founder cooperated in developing a measurement device. Others were existing domestic and foreign businesses with which the founder wished to work commercially. Though all these contacts contributed to his knowledge and understanding of both the technological and the marketing aspects of the industry, the Korean and Israeli researcher-entrepreneur role models were his key influences who helped him form positive perceptions of the opportunity of turning optoelectronic prototypes into marketable solutions. These role models encouraged the entrepreneur to act and transform his initial third-person opportunity perception, of globally oriented optoelectronic business, into a first-person opportunity.

All in all, the novice entrepreneurs who founded Toy and Opti developed their perceptions of the feasibility and desirability of international opportunities by relying on their (mostly weak) network ties, including those with international entrepreneurs who served as role models. These international ties were crucial for developing positive perceptions of their new ventures and early internationalization.

Discussion

Entrepreneurs who embark on internationalizing their business from its very inception use a variety of network ties to identify and evaluate opportunities. The networks help them develop such opportunities and strengthen their commitment, as suggested earlier by Johanson and Vahlne (2006, 2009). However, the study outcomes show that international entrepreneurs may learn and develop international opportunities not only through strong relationships characterized by increasing commitment but also through weak ties. Serendipitous encounters may either generate new knowledge about the available international opportunities (Crick and Spence 2005) or modify the perceptions of opportunities that had already been considered by nascent entrepreneurs. At the time the surveyed entrepreneurs were on the lookout for new business opportunities, their key ties, whether strong or weak, enabled them to form positive perceptions of their opportunities and/or the combi-

nation of the resources at their disposal (the means) and the possible ends, leading to their commitment to take advantage of the international business opportunities.

In the case of Milki, the international business opportunity as such was identified by the founder through accidental contact with a fellow entrepreneur/manager. As for the founder of Opti, his key turning point was his postdoctoral stay in South Korea during which he observed Korean researcher-entrepreneurs who managed to succeed without a strong financial backing despite the fact that their level of knowledge in the initial phases of product development and new venture creation did not exceed his own. This contributed to his latent hypothesis that international activities in the high-tech sector are not confined to resource-rich ventures but are open to researchers like him.

Though such serendipitous encounters preceded entrepreneurial internationalization, they did not replace a deliberate search for the knowledge and resources necessary for such international strategy to be implemented (Denrell, Fang, and Winter 2003). Rather, they triggered a process of opportunity perception (Renko, Shrader, and Simon 2012), also by building new network ties.

Proposition 1 An entrepreneur's social capital (network) contributes to the formation of international opportunity perceptions, thus speeding up action upon international opportunities.

The study shows also that nascent international entrepreneurs face uncertainty in connection not only with the novelty of the international environment but, as especially true for novice entrepreneurs, with ambiguity about the entrepreneur's ability to exploit the opportunity (state and effect uncertainties according to the classification of McKelvie, Haynie, and Gustavsson 2011). Networks seem to moderate the lack of prior international business experience as well as uncertainty about the outcomes of an entrepreneur's actions. In the case of novice entrepreneurs, such networks enhance their self-efficacy perceptions concerning their start-ups (Dimov 2010) as well as their internationalization.

Toy's cofounder accidentally encountered a migrant Polish entrepreneur who showed him the toy industry, invited him to an industry

trade fair, and introduced him to e-commerce tools. This led the cofounder to favorably evaluate a previously considered third-person opportunity of placing RPG accessories on international markets. As suggested by previous research, confidence in opportunities is an important contributor to new venture establishment (Dimov 2010). In line with previous studies (Bosma et al. 2012; Krueger and Brazeal 1994; Vohora, Wright, and Lockett 2004), it is argued that crucial role models play an important role in the development of perceptions of the desirability and feasibility of opportunities, and thus furthering a transition from the initial international business hypothesis to the phase of opportunity commitment and development. Role models are not only a potential source of information, they can also boost the confidence of novice entrepreneurs in their ability to take on the challenges involved in forming INVs.

The Opti founder has met a successful business person who became his point of reference and an inspiring role model. The cofounder of Toy had a similar experience of being inspired by a Polish migrant entrepreneur.

Whereas previous studies have equated role models with parent entrepreneurs (Delmar and Davidsson 2000; Scherer et al. 1989), this study demonstrates, in line with other very recent findings (Bosma et al. 2012), that novice entrepreneurs may find their role models in their broader networks of weaker ties as well. As the surveyed entrepreneurs had no entrepreneurial role models among their relatives, they resorted to weaker serendipitous ties. The international role models they encountered contributed to their decision to pursue international opportunities by forming positive perceptions of such opportunities, reducing uncertainty, and modifying their perceptions concerning the resources needed to establish INVs. It is not altogether clear whether access to these role models should be ascribed purely to serendipity, to membership in an internationally oriented group (academics, hobbyists), or perhaps be associated with their active search for such role models.

The arguments described have led the authors to submit the following proposition.

Proposition 2 Network ties (mostly weak ties and role models) make the perceptions of the desirability and feasibility of international opportunities by novice (nascent) entrepre-

neurs more favorable, contributing to their transition from third-person to first-person opportunity perceptions.

Thus, whereas earlier research suggested that nascent international entrepreneurs use their networks as a tool to develop global strategies (Andersson and Wictor 2003), the authors suggest that networks may also contribute to the evaluation of international business hypotheses by affecting the perceptions of desirability and feasibility. Therefore, nascent entrepreneurs who think of starting international ventures may benefit from exploiting the available ties with other internationally active entrepreneurs, even if such contacts do not directly translate into international sales.

Experienced nascent entrepreneurs were found to use their network ties differently than their novice counterparts. The more experienced entrepreneurs treated network ties mainly as a source of information on technology, and, to a lesser extent, a source of market intelligence. Tele's founder reported on how his strong ties with colleagues from university years strengthened the resource base necessary to initiate the innovative business idea he conceived. He also used his ties from a previous business to launch Tele's services on the market. Milki's founder used a personal contact to explore casein production technologies and better understand the market. To that end, he relied on his acquaintance with a former manager of a dairy cooperative who advised him on certain issues related to casein properties, casein production, and market demand for casein products.

Whereas novice entrepreneurs, who tend to assess opportunities more emotionally (Keh, Foo, and Lim 2002), end up being more reliant on single role models, their more experienced counterparts find the most value in maintaining strong trust-based ties during incubation. This is consistent with prior research that shows that entrepreneurs rely on strong ties in the initial phase of new venture creation (Hite and Hesterly 2001; Larson and Starr 1993).

In view of what has just been mentioned, the following research proposition has been put forth.

Proposition 3 Networks (particularly when comprised of strong ties) make experienced entrepreneurs more likely to perceive international opportunities as feasible and

contribute to transitions from third-person to first-person opportunity perceptions.

The discussion and propositions described earlier were used to construct a model of perceptions of international opportunity (Figure 1) complete with a cognitive dimension and its interplay with network ties. The model draws and builds upon the model of the opportunity attention and evaluation stages proposed by McMullen and Shepherd (2006, p. 140).

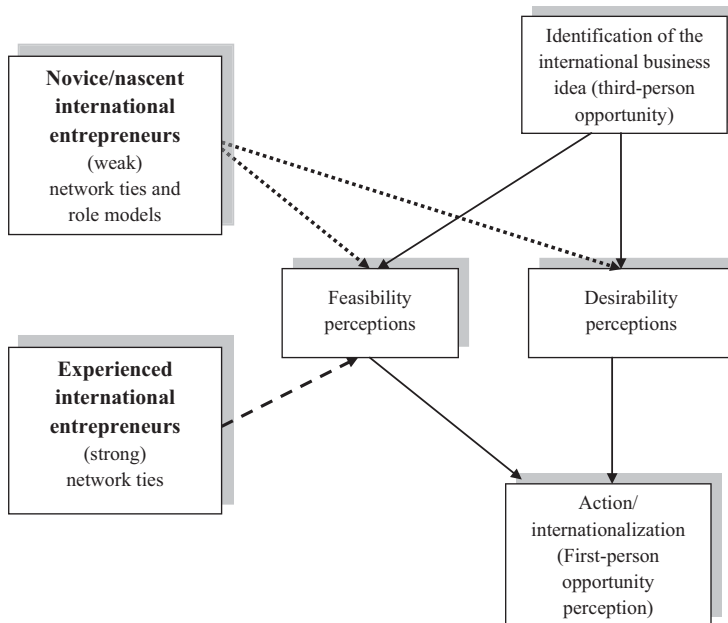
The authors view international entrepreneurship as a process proceeding from formulating hypotheses regarding an international business opportunity to judging its feasibility and attractiveness to committing and subsequently exploiting the opportunity. In such a process, network ties affect the way in which the attractiveness and feasibility of opportunities are perceived. This, in effect, establishes a link between judgment under uncertainty and networking. Networks not only facilitate international opportunity identification but also have the potential to trigger commitment to developing such opportunities.

Conclusions and Implications

The study explores a neglected area of research concerning the pre-incubation phase of INVs and, in particular, the role of networks in opportunity perceptions and eventually in INV creation. It responds to recent calls for more consideration of pre-start-up history and the role of networks in the identification and development of international opportunities (Chandra, Styles, and Wilkinson 2012). The study contributes to a better understanding of opportunity evaluation and transition from third-person opportunity perceptions to first-person opportunity perceptions in the context of INVs. It was posited that network ties affect perceptions of the feasibility and desirability of international opportunities, consequently impacting upon the pace of internationalization. However, it was shown that the process varies depending on the prior international business experience of entrepreneurs.

Network ties help entrepreneurs assess international opportunities. As Chandra, Styles, and Wilkinson (2012) indicate, the pace of

Figure 1
Model of International Opportunity Perceptions among Novice/Nascent and Experienced International Entrepreneurs



internationalization may also depend on the industry context. In the case of the four companies surveyed as part of the study, the industry context favored international operations. Thus, network ties were found to affect the perceptions of international opportunities during the incubation phase. In other contexts in which one could feasibly exploit domestic opportunities, the impact of network ties on the perceptions of international opportunities could be seen after the official start-up. Evidence has nevertheless been found to demonstrate that network ties do influence the pace at which international opportunities are exploited as they affect the perceptions of feasibility and desirability. The impact of network ties differs for entrepreneurs who have in the past been exposed to international business as their perceptions of feasibility are modified the most by strong ties whereas novice entrepreneurs' perceptions of both feasibility and desirability are mostly affected by weak ties.

Role models have been found to play an important part in opportunity evaluation by international novice entrepreneurs. Though, generally speaking, international ties of nascent novice entrepreneurs were rather modest, their inspiring role models had the important function of modifying the perceptions of international opportunities and consequently initializing the development of business ideas. The role models boost confidence in opportunities (Dimov 2010) increasing the likelihood of nascent entrepreneurial behavior, new venture formation, and its prompt internationalization. Opportunity confidence seems to be a precondition for moving from third-person opportunity perceptions to first-person opportunity perceptions as well as for their subsequent enactment. A focus on this link has increased the understanding of the emergence of INVs. The findings support the recent arguments that effectuation logic (Sarasvathy 2001) can explain the creation and growth of INVs (Andersson 2011; Evers and O'Gorman 2011). As effectuating entrepreneurs aim primarily to control opportunity development and/or creation, their perceptions of feasibility and therefore those of controllability should affect their decision to commit and, as a consequence, the likelihood of INV creation. Networks, in their turn, increase the perceptions of controllability of highly uncertain international environments, encouraging international entrepreneurial activity of newly founded ventures.

As the investigation carried out for the purposes of this study is of a qualitative and explorative nature, its outcomes can only be generalized to a limited extent. Another limitation of the study lies in the fact that all of its subjects reside in the single country of Poland whose ongoing transition may well make it a specific case. A quantitative cross-country analysis might therefore be needed in order to verify the role of networks in the pre-start-up and creation phases of INV cycles. The authors suspect that the impact of weak ties with role models could be stronger in the absence of other strong ties, such as those with entrepreneurial relatives or close friends. The availability of such ties could vary from one country to another depending on their entrepreneurial traditions. In transition economies, whose former command-economy systems subdued entrepreneurship making role models less abundant, such weak ties could play a relatively greater role.

As the study has been carried out in the context of international entrepreneurs and INVs, one has to be careful about extending its conclusions to other contexts. It is nevertheless possible that in domestic environments characterized by high levels of uncertainty similar to those found in international markets, networks could play a similar role in opportunity perceptions.

Despite the limitations noted hereinabove, the findings of this study may offer useful insights that are also of value for policymakers. The findings demonstrate how network ties facilitate the process of international opportunity evaluation and how, as a consequence, they may increase the creation of new ventures, which choose to internationalize their operations from the very moment of their inception. Policymakers might be advised to, for example, increase access to international entrepreneurial models mostly for novice entrepreneurs. Such role models could, for example, be found within the networks of international business angels. On the basis of the results obtained, it is expected that even weak ties developed during investor's meetings and workshops within such networks could positively affect the perceptions of the desirability and feasibility of INVs and their capacity to internationalize. Therefore, programs supporting exchanges of experience among international entrepreneurs by means of, for instance, involving them in new

venture creation, could be helpful in encouraging more international start-ups.

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References

- Aldrich, H. (1999). *Organizations Evolving*. Thousand Oaks, CA: Sage Publications.
- Aldrich, H. E., and C. Zimmer (1986). "Entrepreneurship through Social Networks," in *The Art and Science of Entrepreneurship*. Eds. D. Sexton and R. Smilor. New York: Ballinger, 3–23.
- Also, G. A., and L. Kolvereid (1998). "The Business Gestation Process of Novice, Serial, and Parallel Business Founders," *Entrepreneurship: Theory and Practice* 22(4), 101–114.
- Andersson, S. (2011). "International Entrepreneurship, Born Globals and the Theory of Effectuation," *Journal of Small Business and Enterprise Development* 18(3), 627–643.
- Andersson, S., and I. Wictor (2003). "Innovative Internationalisation In New Firms: Born Globals, The Swedish Case," *Journal of International Entrepreneurship* 1(3), 249–276.
- Baron, R. A., and M. D. Ensley (2006). "Opportunity Recognition as the Detection of Meaningful Patterns: Evidence from Comparisons of Novice and Experienced Entrepreneurs," *Management Science* 52(9), 1331–1344.
- Bosma, N., J. Hessels, V. Schutjens, M. Van Praag, and I. Verheul (2012). "Entrepreneurship and Role Models," *Journal Of Economic Psychology* 33(2), 410–424.
- Butler, J. E., R. Doktor, and F. A. Lins (2010). "Linking International Entrepreneurship to Uncertainty, Opportunity Discovery, and Cognition," *Journal of International Entrepreneurship* 8(2), 121–134.
- Carsrud, A., and M. Brännback (2011). "Entrepreneurial Motivations: What Do We Still Need to Know?" *Journal of Small Business Management* 49(1), 9–26.
- Chandra, Y., C. Styles, and I. Wilkinson (2009). "The Recognition of First Time International Entrepreneurial Opportunities. Evidence from Firms in Knowledge-Intensive Industries," *International Marketing Review* 26(1), 30–61.
- (2012). "An Opportunity-Based View of Rapid Internationalization," *Journal of International Marketing* 20(1), 74–102.
- Coviello, N. E., and H. Munro (1995). "Growing the Entrepreneurial Firm: Networking for International Market Development," *European Journal of Marketing* 29(7), 49–61.
- (1997). "Network Relationships and the Internationalization Process of Small Software Firms," *International Business Review* 6(4), 361–386.
- Crick, D., and M. V. Jones (2000). "Small High Technology Firms and International High Technology Markets," *Journal of International Marketing* 8(2), 63–85.
- Crick, D., and M. Spence (2005). "The Internationalisation of 'High Performing' UK High-Tech SMEs: A Study of Planned and Unplanned Strategies," *International Business Review* 14(2), 167–185.
- De Carolis, D. M., and P. Saporito (2006). "Social Capital, Cognition, and Entrepreneurial Opportunities: A Theoretical Framework," *Entrepreneurship: Theory and Practice* 30(1), p41–p56.
- De Clercq, D., H. J. Sapienza, R. I. Yavuz, and L. Zhou (2012). "Learning and Knowledge in Early Internationalization Research: Past Accomplishments and Future Directions," *Journal of Business Venturing* 27(1), 143–165.
- De Jong, J. P. J. (2013). "The Decision to Exploit Opportunities for Innovation: A Study of High-Tech Small-Business Owners," *Entrepreneurship: Theory and Practice* 37(2), 281–301.
- Delmar, F., and P. Davidsson (2000). "Where Do They Come From? Prevalence and Characteristics of Nascent Entrepreneurs," *Entrepreneurship and Regional Development* 12(1), 1–23.
- Denrell, J., C. Fang, and S. G. Winter (2003). "The Economics of Strategic Opportunity," *Strategic Management Journal* 24(10), 977–990.
- Dimov, D. (2010). "Nascent Entrepreneurs and Venture Emergence: Opportunity Confidence, Human Capital, and Early Planning," *Journal of Management Studies* 47(6), 1123–1153.
- Edelman, L., and H. Yli-Renko (2010). "The Impact of Environment and Entrepreneurial

- Perceptions On Venture-Creation Efforts: Bridging the Discovery and Creation Views of Entrepreneurship," *Entrepreneurship: Theory and Practice* 34(5), 833–856. doi: 10.1111/j.1540-6520.2010.00395.x.
- Elfring, T., and W. Hulsink (2003). "Networks in Entrepreneurship: The Case of High-Technology Firms," *Small Business Economics* 21(4), 409–422.
- Ellis, P. D. (2000). "Social Ties and Foreign Market Entry," *Journal of International Business Studies* 31(3), 443–469.
- Evers, N., and C. O'Gorman (2011). "Improved Internationalization in New Ventures: The Role of Prior Knowledge and Networks," *Entrepreneurship and Regional Development* 23(7–8), 549–574.
- Fitzsimmons, J. R., and E. J. Douglas (2011). "Interaction between Feasibility and Desirability in the Formation of Entrepreneurial Intentions," *Journal of Business Venturing* 26(4), 431–440.
- Greve, A. (1995). "Networks and Entrepreneurship—An Analysis of Social Relations, Occupational Background, and Use of Contacts During the Establishment Process," *Scandinavian Journal of Management* 11(1), 1–24.
- Hite, J. M., and W. S. Hesterly (2001). "The Evolution of Firm Networks: From Emergence to Early Growth of the Firm," *Strategic Management Journal* 22(3), 275–286.
- Jack, S. (2005). "The Role, Use and Activation of Strong and Weak Network Ties: A Qualitative Analysis Ties: A Qualitative Analysis," *Journal of Management Studies* 42(6), 1233–1259.
- Jenssen, J. I., and H. F. Koenig (2002). "The Effect of Social Networks on Resource Access and Business Start-Ups," *European Planning Studies* 10(8), 1039–1046.
- Johanisson, B. (1988). "Business Formation—A Network Approach," *Scandinavian Journal of Management* 4(3–4), 83–99.
- Johanson, J., and J.-E. Vahlne (2006). "Commitment and Opportunity Development in the Internationalization Process: A Note on the Uppsala Internationalization Process Model," *Management International Review* 46(2), 165–178.
- (2009). "The Uppsala Internationalization Process Model Revisited: From Liability of Foreignness to Liability of Outsidership," *Journal of International Business Studies* 40(9), 1411–1431.
- Jones, M. V., and N. E. Coviello (2005). "Internationalisation: Conceptualising an Entrepreneurial Process of Behaviour in Time," *Journal of International Business Studies* 36(3), 284–303.
- Keh, H. T., M. D. Foo, and B. C. Lim (2002). "Opportunity Evaluation under Risky Conditions: The Cognitive Processes of Entrepreneurs," *Entrepreneurship: Theory and Practice* 27(2), 125–148.
- Kontinen, T., and A. Ojala (2011). "International Opportunity Recognition among Small and Medium-Sized Family Firms," *Journal of Small Business Management* 49(3), 490–514.
- Krueger, N. (1993). "The Impact of Prior Entrepreneurial Exposure on Perceptions of New Venture Feasibility and Desirability," *Entrepreneurship: Theory and Practice* 18(1), 5–21.
- Krueger, N. F., and D. V. Brazeal (1994). "Entrepreneurial Potential and Potential Entrepreneurs," *Entrepreneurship: Theory and Practice* 18(3), 91–104.
- Larson, A., and J. A. Starr (1993). "A Network Model of Organization Formation," *Entrepreneurship: Theory and Practice* 17(2), 5–15.
- Lindstrand, A., K. Eriksson, and D. D. Sharma (2009). "The Perceived Usefulness of Knowledge Supplied by Foreign Client Networks," *International Business Review* 18(1), 26–37.
- McDougall, P. P., B. M. Oviatt, and R. C. Shradar (2003). "A Comparison of International and Domestic New Ventures," *Journal of International Entrepreneurship* 1(1), 59–82.
- McKelvie, A., J. M. Haynie, and V. Gustavsson (2011). "Unpacking the Uncertainty Construct: Implications for Entrepreneurial Action," *Journal of Business Venturing* 26(3), 273–292.
- McMullen, J. S., and A. Shepherd (2006). "Entrepreneurial Action and the Role of Uncertainty in the Theory of Entrepreneur," *Academy of Management Review* 31(1), 132–152.
- Madsen, T. K., and P. Servais (1997). "The Internationalization of Born Globals: An Evolutionary Process?," *International Business Review* 6(6), 561–583.
- Meyer, K., and A. Skak (2002). "Networks, Serendipity and SME Entry into Eastern Europe," *European Management Journal* 20(2), 179–188.
- Mort, G. S., and J. Weerawardena (2006). "Networking Capability and International

- Entrepreneurship," *International Marketing Review* 23(5), 549–572.
- Mosey, S., and M. Wright (2007). "From Human Capital to Social Capital: A Longitudinal Study of Technology Based Academic Entrepreneurs," *Entrepreneurship Theory and Practice* 31(6), 909–935.
- Nordman, E. R., and S. Melén (2008). "The Impact of Different Kinds of Knowledge for the Internationalization Process of Born Globals in the Biotech Business," *Journal of World Business* 43(2), 171–185.
- Oviatt, B. M., and P. P. McDougall (1997). "Challenges for Internationalization Process Theory: The Case of International New Ventures," *Management International Review* 37(2), 85–99.
- (2005). "Defining International Entrepreneurship and Modelling the Speed of Internationalization," *Entrepreneurship: Theory and Practice* 29(5), 537–553.
- Ozgen, E., and R. A. Baron (2007). "Social Sources of Information in Opportunity Recognition: Effects of Mentors, Industry Networks, and Professional Forums," *Journal of Business Venturing* 22(2), 174–192.
- Prashantham, S., and C. Dhanaraj (2010). "The Dynamic Influence of Social Capital on the International Growth of New Ventures," *Journal of Management Studies* 47(6), 967–994.
- Prashantham, S., and S. Young (2011). "Post-Entry Speed of International New Ventures," *Entrepreneurship: Theory and Practice* 35(2), 275–292.
- Presutti, M., C. Boari, and L. Fratocchi (2007). "Knowledge Acquisition and the Foreign Development of High-Tech Start-Ups: A Social Capital Approach," *International Business Review* 16(1), 23–46.
- Renko, M., R. C. Shrader, and M. Simon (2012). "Perception of International Entrepreneurship: A General Framework," *Management Decision* 50(7), 1233–1251.
- Rotefoss, B., and L. Kolvereid (2005). "Aspiring, Nascent and Fledgling Entrepreneurs: An Investigation of the Business Start-Up Process," *Entrepreneurship and Regional Development* 17(2), 109–127.
- Sarasvathy, S. D. (2001). "Causation and Effectuation: Toward a Theoretical Shift from Economic Inevitability to Entrepreneurial Contingency," *Academy of Management Review* 26(2), 243–263.
- Scherer, R. F., J. S. Adams, S. S. Carley, and F. A. Wiebe (1989). "Role Model Performance Effects on Development of Entrepreneurial Career Preference," *Entrepreneurship: Theory and Practice* 13(3), 53–71.
- Sequeira, J., S. L. Mueller, and J. E. McGee (2007). "The Influence of Social Ties and Self-Efficacy Informing Entrepreneurial Intentions and Motivating Nascent Behaviour," *Journal of Developmental Entrepreneurship* 12(3), 275–293.
- Shane, S., and D. Cable (2002). "Network Ties, Reputation, and the Financing of New Ventures," *Management Science* 48(3), 364–381.
- Shane, S., and S. Venkataraman (2000). "The Promise of Entrepreneurship as a Field of Research," *Academy of Management Review* 25(1), 217–228.
- Sharma, D. D., and A. Blomstermo (2003). "The Internationalization Process of Born Globals: A Network View," *International Business Review* 12(6), 739–753.
- Vasilchenko, E., and S. Morrish (2011). "The Role of Entrepreneurial Networks in the Exploration and Exploitation of Internationalization Opportunities by Information and Communication Technology Firms," *Journal of International Marketing* 19(4), 88–105.
- Vohora, A., M. Wright, and A. Lockett (2004). "Critical Junctures in the Development of University High-Tech Spinout Companies," *Research Policy* 33(1), 147–175.
- Yin, R. K. (2003). *Case Study Research: Design and Methods*. Beverly Hills, CA: Sage Publications.
- Zahra, S., J. S. Korri, and Y. JiFeng (2005). "Cognition and International Entrepreneurship: Implications for Research on International Opportunity Recognition and Exploitation," *International Business Review* 14(2), 129–146.
- Zucchella, A., G. Palamara, and S. Denicolai (2007). "The Drivers of the Early Internationalization of the Firm," *Journal of World Business* 42(3), 268–280.

Entrepreneurial Orientation and International Performance: The Moderating Effect of Decision-Making Rationality

by Ioanna Deligianni, Pavlos Dimitratos, Andreas Petrou, and Yair Aharoni

This research examines how entrepreneurial orientation (EO) influences international performance (IP) of the firm taking into account the moderating effect of decision-making rationality (DR) on the EO–IP association. Such an investigation is significant because it considers the interplay of strategic decision-making processes supported by the bounded rationality concept in the entrepreneurship field. Drawing from a study on activities of 216 firms in the United States and United Kingdom, the evidence suggests that DR positively moderates the EO–IP association. The findings suggest that managers can improve IP by combining EO with rational (analytical) processes in their strategic decisions.

Introduction

How does being rational (analytical) when making major decisions affect the entrepreneurial firm's performance? Practitioner writings tend to be rather ambivalent on this answer. On the one hand, rationality can "reduce waste of time, money and potential" that would be spent on unsuccessful solutions, but on the other hand, intuitiveness may be associated with powerful motivation, generation of creative solutions, and potentially huge wins of entrepreneurial firms (e.g., Meyer 2013; Wali 2013). The objective of this paper is to provide evidence on this issue that has significant managerial and research implications.

The strategic decision-making literature (Dean and Sharfman 1996; Elbanna and Child

2007; Walter, Kellermanns, and Lechner 2012) approaches "procedural rationality" as an organizational process that top management may undertake to come up with solid decisions. The emphasis in this literature is on high-level managerial involvement in major (strategic) decisions that involve substantial commitment of resources. These decisions have seemingly remained unexplored in the entrepreneurship field that has attempted primarily to identify how entrepreneurs, rather than top management teams, seek to identify opportunities (e.g., Shane 2012). Nonetheless, following the identification of opportunities, firms should also evaluate different strategic decisions collecting information and evaluating dissimilar options. Thus, there appears to be a void in the entrepreneurship literature on the influence of

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organizational processes that impact on the entrepreneurial orientation (EO)—performance association (Lumpkin and Dess 1996; Slevin and Terjesen 2011; Wiklund and Shepherd 2003). EO in this study encompasses the three variables that are typically used to capture EO, namely innovativeness, proactiveness, and risk-taking (Rauch et al. 2009).

One major organizational process is decision-making rationality (DR). Strategic decision-making process study draws from research on bounded rationality (Simon 1978), which considers rational choice in the decision-making process. In the entrepreneurship field, Brinckmann, Grichnik, and Kapsa (2010, 25) state that “there appears to be a planning euphoria in the entrepreneurship domain,” suggesting that the combination between EO and rationality could influence the performance of the firm. The context of the current examination is the international activities of the firm as these normally present a high level of complexity to management of the firm, rendering the role of strategic decision-making particularly crucial. Wrong strategic decisions in the internationalization context can be detrimental given the lack of knowledge and likely high risk for the firm. Therefore, we study how the EO–DR combination affects international performance (IP) of the firm. DR is operationalized through the degree to which the top management of the firm searches and analyzes relevant information when making strategic decisions for its ventures abroad, and employs a systematic process with quantitative techniques in these decisions (Dean and Sharfman 1996).

The present study contributes to the entrepreneurship literature in that it links EO to the bounded rationality notion associated with DR. Rationality effectively serves as the process moderator affecting the EO–IP association, and its use enriches the “strategic process consideration” (Covin, Green, and Slevin 2006, p. 72) that may be implemented to a larger extent to advance understanding of EO (Lumpkin and Dess 2001). In essence, this examination argues that the value of EO for IP of the firm depends also on the level of rationality the top management employ. In doing so, the current investigation is seemingly the first study that identifies DR as a missing link between EO and IP for strategic decisions in the entrepreneurship literature. This study extends the emerging theme of opportunity alertness and identification in the entrepreneurship field.

This article is structured as follows. The second section investigates the research background to this study related to DR and advances its two research hypotheses. The third section explores methodological details. The fourth section presents the results of the analysis, whereas the fifth section discusses the findings. The concluding section outlines the implications of this study for theory and management practice, and its limitations and future research directions.

Theoretical Background and Research Hypotheses

The Concept of DR. The strategic decision-making process literature draws from the behavioral theory of the firm (Cyert and March 1963), which stresses the multiple goals of top managers in setting objectives for their firm. DR has attracted a significant share of attention in this field (Elbanna 2006; Elbanna and Child 2007; Klingebiel and De Meyer 2013; Papadakis, Lioukas, and Chambers 1998). Definitions of rationality used in these studies vary. The neoclassical economics view, which considers the top management team as actors possessing full information, is challenged by the *bounded rationality* comprehension of rationality. Bounded rationality violates this information and utility maximization assumption, and links DR to behaviors that are legitimate in pursuing goals “which are good enough rather than the best” (Eisenhardt 1997, p. 1). Bounded rationality can involve aspects of rationality such as sequential attention to objectives, quasi-resolution of conflict, and satisficing (Simon 1947, 1957). The acknowledgment of the bounded rationality concept shifts emphasis from the study of neoclassical economic models to that of organizational settings and essentially a more realistic portrayal of strategic decision-making.

In line with this bounded rationality approach in strategic decision-making process (Dean and Sharfman 1996; Elbanna and Child 2007; Walter, Kellermanns, and Lechner 2012), the current study uses procedural rationality to measure DR, which is the extent to which the decision-making process makes the best decision possible under given circumstances. Procedural rationality reflects the synoptic formalism or comprehensive planning model (Anderson 1983; Grant and King 1979). The opposite of a rational strategic decision-making process is the purely intuitive one. Intuition is

“a mental process based on a ‘gut feeling’ as opposed to explicit, systematic analysis, which yields an intuitive insight or judgment that is used as a basis for decision-making” (Elbanna, Child, and Dayan 2013, p. 150).

The entrepreneurship literature has paid considerable attention to how opportunities are discovered. Some researchers suggest that opportunities become apparent to entrepreneurs who possess knowledge on acquiring, translating, and employing sources of information (Anokhin, Wincent, and Autio 2011; Eckhardt and Shane 2003). However, other scholars assert that entrepreneurs realize opportunities through active search (Sarasvathy et al. 2003; Shane 2003). Social interaction with entrepreneurial stakeholders has a predominant role in this search (Chiles, Bluedorn, and Gupta 2007). Nonetheless, it may be that opportunities are both found and enacted (Venkataraman et al. 2012), and thus, these two viewpoints are not mutually exclusive. During this opportunity discovery process, entrepreneurs can engage in both causation and effectuation processes (Sarasvathy 2001). This literature seemingly underlines solely what individual entrepreneurs, rather than top management teams, do in order to become alert to opportunities and, more significantly, tends to disregard what happens to decision-making following the identification of opportunities, notably how such teams make strategic decisions when substantial level of resources are involved. This is especially true for small enterprises that face a liability of smallness and that possess limited resources.

In a similar vein, the international entrepreneurship and international business studies do not pay considerable attention to the *evaluation* of critical opportunities, notably strategic decision-making abroad. Researchers acknowledge that EO can be instrumental to the exploitation of opportunities, its strategy, and performance abroad (McDougall and Oviatt 2000; Oviatt and McDougall 2005). EO is a strategic orientation that reflects the organizational processes (such as DR), which the firm employs when acting entrepreneurially (Lumpkin and Dess 1996; Wiklund and Shepherd 2003). A part of the international business literature, for example, the transaction cost approach, is largely influenced by neoclassical economics when it comes to strategic decisions abroad (Aharoni, Tihanyi, and Connelly 2011; Buckley, Devinney, and

Louviere 2007). However, in line with the bounded rationality approach, it is acknowledged that personal values and cognitive capabilities of the top management team substantially affect whatever rational point of view is adopted (Hutzschenreuter, Pedersen, and Volberda 2007). Attempting to test explicitly the rationality concept in the internationalization context, Wennberg and Holmquist (2008) report evidence that entrepreneurial firms follow a bounded rationality process that is triggered by performance feedback. Despite the decisive role of management teams to enterprise internationalization (Coombs, Sadrieh, and Annavarjula 2009; Wheeler, Ibeh, and Dimitratos 2008), there is seemingly insignificant emphasis on how rational their strategic decision-making processes should be (Aharoni 2010; Nielsen and Nielsen 2011).

Decision Rationality and IP. Empirical studies in the strategic decision-making field generally report a positive relationship between DR and firm performance (Fredrickson and Mitchell 1984; Goll and Rasheed 1997; Priem, Rasheed, and Kotulic 1995). Miller (2007) posits that this may be because rational processes assist decision-makers cope effectively with the complexity associated with strategic decisions, reduce some of the impacts of cognitive biases, and enhance implementation motivation among the top management team. The positive association between rationality and effectiveness is also established in strategic decision-making studies that use decision effectiveness rather than performance of the firm as the unit of analysis (Dean and Sharfman 1996; Elbanna and Child 2007). Internationalized firms that engage in analytical planning are likely to have the ability to achieve an alignment between organizational resources and critical opportunities (Shoham 1999). A relatively recent literature review in the small firm internationalization field (Wheeler et al. 2008) further suggests a strong link between DR and IP. Consequently,

H1: DR is positively associated with IP.

EO, Decision Rationality and IP. Recent literature reviews suggest that EO enhances performance of the firm in general (Rauch et al. 2009) and in the international marketplace in particular (Covin and Miller 2014). However, it may be that this positive relationship is not

universal, and in particular contexts, it can be nonsignificant or even negative (e.g., Frank, Kessler, and Fink 2010). This consideration begets the need for the simultaneous examination of other variables affecting this relationship. With regard to DR, Slater and Narver (1995) support the view that systematic rational analysis is likely to enhance performance of entrepreneurial firms in two ways. First, it reduces the chances that these firms will move too quickly to exploit subsequent critical opportunities without reaping all benefits linked to their current opportunities. Second, it also increases the prospects for generative learning that encourages more radical innovative products and services. In addition, Shane and Delmar (2004) find that entrepreneurial firms are less likely to fail if they engage in detailed analysis and planning before commencing strategic activities. This is because the time span between planning and feedback in entrepreneurial firms is much shorter than that in conservative organizations. Covin, Green, and Slevin (2006) further suggest that entrepreneurial firms have more chances to analyze and capture information about what should be done to successfully make new critical efforts, and apply effectively the lessons learned in the future. It appears that when entrepreneurial firms offering innovative products follow rational routines, they can achieve superior market performance (Hammedi, van Riel, and Sasovova 2011). Even when firms choose to stay with an old technology, they may behave entrepreneurially and proactively toward competition if they perform a rational analysis (Adner and Snow 2010). In a nutshell, all this evidence supports the argument that strategic entrepreneurial activities can lead to enhanced performance when they are facilitated by rational decision-making (Chwolka and Raith 2012).

DR in international entrepreneurial firms is also important inasmuch as it facilitates internalization of information on external markets required for the small firm to be successful abroad (Liesch and Knight 1999). This internalization of information reduces uncertainty encountered in the international environment as far as strategic decisions are concerned. Jones, Coviello, and Tang (2011) in their recent literature review on international entrepreneurship further argue in favor of a positive involvement of analytical decision-making on effective internationalization. Hence,

H2: DR moderates the association between EO and IP: IP increases with EO but at a faster rate for those firms distinguished by DR.

Methodology

Sample and Data Quality

A two-country mail survey was carried out in the United States and United Kingdom, which are two large markets characterized by Anglo-Saxon cultural values (Hofstede 2013). Target firms should have employed between 10 and 250 persons; have been indigenously owned (not be subsidiaries of foreign firms); and have international sales through exporting, joint venture, or wholly owned subsidiary modes. The *Dun and Bradstreet* database was employed as the sampling frame to randomly select internationalized firms. This database is customarily used for firms that operate in these two countries.

To minimize potential effects of sample differences that are not relevant to the purposes of the study, efforts were made to ensure that the samples from the two countries were equivalent in terms of variables other than the ones under examination (Schaffer and Riordan 2003). Our strategy was to ensure equivalence in key firm characteristics, namely, age, industry, and international experience as these characteristics could influence the variables under investigation (Ryan et al. 1999). To achieve this, we compared the profiles of firms in the U.S. and U.K. sampling databases across these characteristics. The analysis of the means suggested homogeneity across these variables. Consequently, our efforts focused on reducing sampling bias by randomly selecting 750 firms from each country. Moreover, acknowledging that differences between samples may remain after applying a matching strategy, we statistically controlled for these characteristics (Greer and Stephens 2001).

Data were gathered in the two countries during the same period and were collected through a structured questionnaire mailed to the CEO of the firm. The CEO was asked to complete the questionnaire or hand it to that manager who was best informed on international activities of the firm. Managers were not required to state their names on completed questionnaires to protect anonymity. To safeguard interrater reliability, a second manager in the same firm was asked to fill the questionnaire in 10 percent of the sample, notably 22 firms.

As data collection was carried out in two countries, a sequence of steps suggested by Johnson (1998) was followed to ensure that the procedures used for the execution of the survey were equivalent for the two countries. First, cultural experts from both the United States and United Kingdom were employed as judges for evaluating the appropriateness of specific survey items within their culture. Second, "good question" wording practices were adopted to increase questionnaire comprehensiveness such as the use of specific rather than general terms and the employment of active rather than passive voice. The questionnaire was additionally pretested by 12 academics and managers to assess its clarity prior to the launch of the survey. The managers that participated in the pretesting were from the United States and United Kingdom and were similar to the respondents of the survey. To increase response rates, a cover letter, which was the same in the two countries, was included explaining the objectives of this research project and requesting cooperation. Also, a second wave of questionnaires was mailed to the firms three weeks after the dispatch of the first wave. Follow-up phone calls were conducted in between the two mailings.

The effective response rate was 15 percent (115 firms) in the United States and 13 percent (101 firms) in the United Kingdom. This yielded 216 firms as the total number of observations. To assess nonresponse bias in each country, comparisons of respondent firms with firms in the sample across organizational characteristics, namely, age, industry, and international experience, were conducted. The t-tests results yielded nonsignificant *p*-values ranging from .23 to .48. Furthermore, respondents to the first mailing were contrasted to respondents of the second mailing across these same organizational demographics for both countries. Again, no statistically significant differences were found as the *p*-values were above .31, thereby suggesting that nonresponse bias was not likely to be an issue (Armstrong and Overton 1977).

To mitigate potential memory recall bias, respondents were asked to provide information on "key internationalization projects" that took place within the last three years. These activities were defined as those ventures that involved significant commitment of resources abroad. Examples given in the questionnaire were *active* involvement in a *new* foreign

country or transition to another foreign market servicing mode, such as a joint venture and wholly owned subsidiary. The questionnaire was addressed to the manager who was best informed about the firm's international activities. Apart from owners, respondents were CEOs and general, export, international operations, marketing, or sales managers. These respondent job titles, which are in line with those that Kumar, Stern, and Anderson (1993) call "major participants," indicate that respondents were involved in the strategic decision-making process of international activities. Checks of responses across different job titles showed no evidence of inconsistencies of responses. Data were also tested for consistency by comparing the responses between the two managers in the firms where a second key respondent completed the questionnaire. In these responses, 91 percent were within one interval or less, a result that provides evidence for strong interrater reliability between the two managers (Shortell and Zajac 1990).

To further control for common method variance, the suggestions of Podsakoff et al. (2003) were followed. To analyze, the questionnaire items were based on previously developed scales; the order of the questions was reversed for some of the items, and twelve academics and managers had checked the items. The questions pertaining to EO, DR, and IP were placed in different sections and pages of the questionnaire so that respondents could not make a connection between independent and dependent variables. In addition, modeling in this study considers interaction effects, which rendered it difficult for the respondent to make any link between variables (Chang, Van Witteloostuijn, and Lorraine 2010). A post-hoc investigation, Harman's one-factor analysis, was additionally employed. Out of the five factors that emerged, the largest factor could explain only 24 percent of the variance, suggesting the absence of a single factor (Podsakoff et al. 2003). As shown in the appendix, exploratory (EFAs) and confirmatory factor analyses (CFAs) further verified the construct validity for all perceptual measures. Collectively, all these actions indicate that common method bias was not likely to be a source of concern in the current study.

Measures

The measures used for this model and the sources from which they are drawn from

are presented in the appendix. In relation to the dependent variable IP, we relied on subjective rather than objective measures for two reasons. First, subjective assessments capture more accurately the multidimensional character of performance as opposed to financial ratios that represent more narrow measures (Venkatraman and Ramanujam 1986). Second, it is very difficult to access objective performance data in small firms (Escriba-Esteve, Sanchez-Peinado, and Sanchez-Peinado 2008). This is particularly true for IP data as firms are not required to publicly report separately their international activities. In a recent review on EO, Rauch et al. (2009) report that self-perceived performance indicators are not problematic, and common method bias is not a concern when capturing performance. Nevertheless, to validate subjective performance measures, we collected international sales ratios from the *Dun and Bradstreet* database for a subsample of the firms that participated in the study (63 firms or 29 percent). The strong significant correlation coefficient of 0.52 attests to the positive association between objective and subjective IP measures.

Seven control variables were employed in this study. The first two variables were firm size and age, which are likely to influence IP (Bausch and Krist 2007; Moen 1999). Size was measured by the logarithm of the number of employees, whereas age by the logarithm of the number of years in operation. Two other control variables were used to account for the degree of internationalization of the firm, which is a multifaceted construct (e.g., Sullivan 1994). These were international experience of the firm that was measured by the logarithm of the number of years the firm had international activities and the mode of international market activities, which was a binary variable indicating whether the firm used only exports (coded as 0) or also advanced entry modes (licensing/franchising, joint venture/strategic alliance, wholly owned subsidiary; all coded as 1) in its foreign markets. Two other control variables pertained to dimensions of the environment of the firm, namely, environmental dynamism and hostility. These can influence IP of the firm (Cadogan, Kuivalainen, and Sundqvist 2009; Luo and Peng 1999). The operationalization of these variables appears in the appendix. The last control variable captured whether the firm operated in manufacturing (coded as 0) or services (coded as 1) sectors. The inclusion of this variable is in accord with the evidence suggest-

ing that activities in different sectors may affect IP (e.g., Contractor, Kundu, and Hsu 2003).

Results

Measurement Invariance

To ensure that it is suitable to apply the measures used in this study to both countries involved, multigroup CFA was conducted to assess measurement invariance (Hult et al. 2008; Steenkamp and Baumgartner 1998). This analysis allowed us to remove the national-level variance from the conceptual model and, thus, test a culture-free theoretical model (cf. Cadogan 2010). In the context of the multigroup CFA, configural and metric invariances of all constructs were examined (cf. Steenkamp and Baumgartner 1998). We found similar patterns of factor loadings and adequate model fit in the two countries for all examined constructs. The model fit was assessed through four indices, notably the comparative fit index (CFI), the non-normed fit index (NNFI), the standardized root mean square residual (SRMR) and the root mean square error of approximation (RMSEA) (Hu and Bentler 1999). Larger values of CFI (0.90) and NNFI (0.90) as well as smaller values of SRMR (0.08) and RMSEA (0.06) indicate a better level of model fit. The results of this analysis, which suggest the existence of configural invariance, are presented in Table 1.

The base model was a configural invariance model with no equality constraints, whereas the obtained model was a metric invariance model in which constraints were set so that the factor loading matrix could be invariant across the two countries. No significant increase was reported between the configural and the metric invariance model for all the constructs examined. The results of this examination, which suggest the existence of metric invariance, are summarized in Table 2.

Overall, the results of the undertaken analyses indicate the existence of measurement invariance for all multi-item variables of this study. With regard to the construct validity of these variables, we followed the process suggested by Spanos and Lioukas (2001), which involved tests of unidimensionality (appendix), reliability and convergent validity (Table 3), and discriminant validity (Table 4). The results of this process overall suggest satisfactory construct validity. To verify the unidimensionality, we examined the significance of factor loadings in both EFA and CFA and the model fit in CFA

Table 1
Confirmatory Factor Analysis for the United States and United Kingdom

	<i>df</i>	χ^2	CFI	NNFI	SRMR	RMSEA
EO						
United States	20	71.489	0.917	0.944	0.076	0.050
United Kingdom	20	62.550	0.915	0.941	0.077	0.046
DR						
United States	2	7.482	0.982	0.945	0.025	0.055
United Kingdom	2	15.745	0.901	0.904	0.064	0.052
IP						
United States	5	64.299	0.902	0.895	0.076	0.060
United Kingdom	5	59.076	0.923	0.911	0.070	0.058
Environment						
United States	8	21.891	0.964	0.933	0.057	0.060
United Kingdom	8	19.593	0.971	0.946	0.049	0.045

Table 2
Comparisons between Configural and Metric Models

	<i>df</i>	$\Delta\chi^2$	<i>p</i> -value
EO	7	9.093	.246
DR	3	0.042	.998
IP	12	19.808	.071
Environment	4	1.805	.772

for each construct. Factor loadings and model fit values in the Appendix are significant for all constructs. Construct reliability, which was assessed by computing the composite reliability estimates and the Cronbach's alpha coefficients, is deemed satisfactory (Table 3). Moreover, convergent validity was examined by calculating the indexes of variance extracted, that is, the amount of construct variance relative to measurement error. All constructs exceed the benchmark value of 50 percent, which provides evidence of convergent validity (Fornell and Larcker 1981). Also, discriminant validity was assessed by comparing two CFA models, notably one constrained model and one unconstrained model, which pertained to the same conceptual domain (in our case, the environment, Venkatraman 1989). Significant difference in the χ^2 of the two models provides

support for discriminant validity. Table 4 shows that $\Delta\chi^2$ is significant at $p < .01$.

Descriptive and Correlation Statistics, and Hypotheses Testing

Table 5 reports the descriptive statistics and correlation coefficients for all variables of this study. The results suggest that multicollinearity is not an issue in this study given that all correlation coefficients are below 0.392, the values of the variance inflation factors are lower than the threshold value of 10, and the tolerance values for all regression variables are higher than the threshold value of 0.10 (as suggested by Hair et al. 1998).

The hypotheses of this research were tested through ordinary least squares (OLS) hierarchical regression models. The results of the current study are shown in Table 6. Model A analyzes the effect of control variables and DR on IP, Model B considers the extra effect of EO, whereas Model C examines the additional interaction effect between EO and DR. All models are statistically significant, and the addition of extra variables considerably improves the variance explained as indicated by ΔR^2 .

DR has a significantly positive coefficient ($p < .01$) in all models. It appears that engagement in intensive information analysis and search in strategic decision-making is crucial to enhanced IP. This evidence provides support to H1. EO has also a consistently positive effect on IP ($p < .05$), which indicates that firms that

Table 3
Reliability and Convergent Validity Tests

	Construct Reliability	Cronbach's Alpha	Variance Extracted
EO	0.840	0.820	0.520
DR	0.820	0.843	0.638
IP	0.826	0.866	0.587
Environmental Dynamism	0.728	0.775	0.516
Environmental Hostility	0.709	0.700	0.473

Table 4
Discriminant Validity

Pair of Constructs ($\Phi = 1$)	
Environment	
Dynamism versus Hostility	χ^2 ($df = 12$) = 32.102 ($p^a = .005$)
Base Model (Unconstrained)	χ^2 ($df = 8$) = 17.101

^aDenotes the significance of χ^2 difference between the constrained and the unconstrained model.

exhibit an innovative, risk-taking, and proactive behavior can enjoy high levels of IP. The addition of the EO \times DR interaction term in Model C is associated with a positive effect on IP ($p < .01$). In order to evaluate this moderating effect, we plotted the simple slopes of the interaction. Figure 1 illustrates this interaction effect by showing the regression lines between EO and IP for low DR ($-1 \times$ standard deviation) and high DR ($+1 \times$ standard deviation). Following Aiken and West (1991), these slopes were computed from the coefficients derived from the regression equation $IP = b_1 + b_2 \times EO + b_3 \times DR + b_4 \times \text{interaction}$. The slopes are highly significant ($p < .001$). Collectively, this evidence provides strong support to H2. Entrepreneurial firms that pursue rational decision-making in strategic decisions are more likely to achieve enhanced IP than those following intuitive processes. To the best of our knowledge, this is the first study providing evidence in favor of such a relationship.

There are two control variables that present consistently highly significant results in the regression analysis. First, younger firms are associated with higher IP ($p < .05$), which is a finding likely to be attributed to their increasing focus on growth (Zhou, Barnes, and Lu 2010). Second, international experience exhibits a positive effect on IP ($p < .05$). As internationalized firms accumulate more experience abroad, they are more likely to become successful in the international marketplace (Johanson and Vahlne 1977).

Robustness Analysis

As EO is facilitated through the rational decision-making process, it may be that the EO effects on performance are channeled through these decision-making process characteristics. In the complex internationalization context, EO may influence IP through DR. Therefore, we investigated a model where DR mediates the EO-IP relationship. To assess this model, we followed Baron and Kenny's (1986) methodology for testing for mediation effects. These authors stipulate three criteria for testing these effects, which in our case are as follows: (1) EO has a significant effect on IP, (2) EO has a significant influence on the mediating variable DR, and (3) a previously significant EO-IP relationship is no longer significant in the presence of DR. These criteria were tested using OLS regression analysis as shown in Table 7. Model A indicates a positive and significant effect of EO on IP ($p < .05$), which is in line with our earlier finding. EO has a significant and positive effect on DR ($p < .05$) in Model B. However, Model C indicates that the third criterion is not valid. The EO effect on IP is still significant ($p < .05$) in the presence of DR. These

Table 5
Descriptive Statistics and Correlations among Variables

Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9
IP	3.16	0.803	1								
EO	3.01	0.705	0.208***	1							
DR	3.56	0.922	0.335***	0.314***	1						
Size (Log)	1.74	0.424	0.201***	0.088	0.194***	1					
Age (Log)	1.45	0.307	-0.043	-0.130	0.001	0.357***	1				
International Experience (Log)	1.27	0.282	0.096	-0.060	0.092	0.290***	0.352***	1			
International Mode	0.44	0.498	0.127*	0.193**	0.158**	0.094	-0.244***	-0.196***	1		
Environmental Dynamism	2.87	0.652	0.100	0.392***	0.194***	0.024	-0.081	0.024	0.307***	1	
Environmental Hostility	2.93	0.743	-0.029	-0.018	0.024	0.083	0.000	0.026	0.284***	0.258***	1
Sector	0.26	0.442	0.145**	-0.015	0.010	-0.005	-0.183***	-0.156**	0.216***	0.173**	0.129

* $p < .10$ level.

** $p < .05$ level.

*** $p < .01$ level (two tailed).

Table 6
Hierarchical OLS Regression on IP

	Model A	Model B	Model C
Size	0.115*	0.105*	0.108*
Age	-0.269**	-0.248**	-0.256**
International Experience	0.223**	0.217**	0.211**
International Mode	0.033	0.021	0.012
Environmental Dynamism	0.004	-0.037	-0.027
Environmental Hostility	-0.128*	-0.100*	-0.102*
Sector	0.129*	0.152**	0.145*
DR	0.258***	0.238***	0.225***
EO		0.115**	0.170**
EO × DR			0.304***
R^2	0.196	0.221	0.259
Adjusted R^2	0.163	0.190	0.218
ΔR^2		0.025**	0.038***

* $p < .10$.

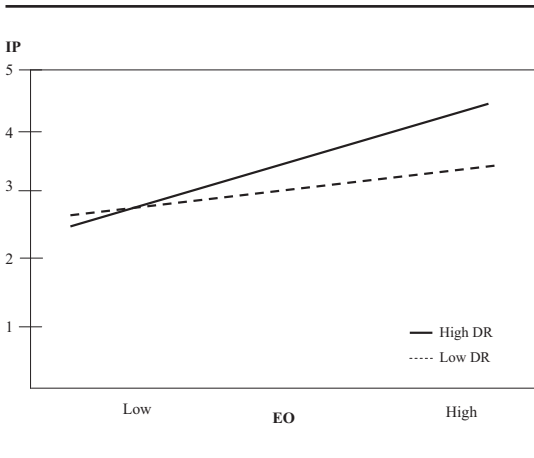
** $p < .05$.

*** $p < .01$.

Standardized regression coefficients are reported.

$n = 216$.

Figure 1
The Moderating Effect of DR on the EO-IP Association



findings suggest there is no sufficient evidence that DR mediates the EO-IP relationship, and so, this result strengthens the finding of H2 linked to the investigated moderating effect.

Discussion

The findings of our research support both our hypotheses. DR is positively associated with IP (H1) in line with the premise of the bounded rationality concept. At first sight, this evidence might appear to contradict some findings that analytical decision-making is problematic as it can slow down entrepreneurial action and hinder identification of opportunities (Allinson et al. 2000; Kor, Mahoney, and Michael 2007). Nevertheless, it appears that DR, when examined in the context of *evaluation* of critical opportunities, enhances performance of the small firm abroad. This positive effect is found despite that DR is likely to be constrained by uncertainty, problem complexity, limited information-processing capacity, and social interaction of the managers. In the entrepreneurship literature, there is some evidence concerning these restricting factors to DR, such as social interaction (e.g., Lechler 2001), and the present research adds to this evidence.

Moreover, our findings suggest that when EO is coupled with DR, performance of the firm is enhanced (H2). Entrepreneurial firms that pursue rational decision-making in strategic

Table 7
OLS Regression Analysis: Testing for DR Mediation

	IP Model A	DR Model B	IP Model C
Size	0.149*	0.188**	0.105*
Age	-0.279**	-0.132*	-0.248**
International Experience	0.262***	0.189*	0.217**
International Mode	0.040	0.081	0.021
Environmental Dynamism	-0.004	0.136*	-0.037
Environmental Hostility	-0.120*	-0.042	-0.100*
Sector	0.147*	-0.020	0.152**
EO	0.162**	0.197**	0.115**
DR			0.238***
R^2	0.153	0.164	0.221
Adjusted R^2	0.136	0.124	0.190

* $p < .10$.

** $p < .05$.

*** $p < .01$.

Standardized regression coefficients are reported.

$n = 216$.

decisions are more likely to achieve enhanced IP than those following intuitive processes. In that respect, our results illuminate the entrepreneurship theory through the argument that the match of EO, which can be viewed as a bundle of fundamental resources and capabilities of the firm, with appropriate processes is valuable to the attainment of the firm (Thorgren, Wincent, and Örtqvist 2012; Welter 2011). To the best of our knowledge, this is the first time that this assertion is made in the entrepreneurship literature in relation to the combination of EO *and* DR that proves to be a strategic process affecting positively the performance of the firm. Going one step further, the evidence of the insignificant mediation results strengthens the view that DR is not the channel toward performance but rather the facilitator of performance in entrepreneurial firms.

By endorsing bounded rationality of the top management team in small firms, the findings of the present study further allude to the fact that when it comes to the critical opportunity evaluation stage, it is the group of managers that has to be taken into account. Traditional entrepreneurship research still considers EO and performance of the small firm as predominantly the manifestation and achievement of a sole entrepreneur (Chowdhury 2005). The impact of the sole entrepreneur is obvious in

many works in this field (Groves, Vance, and Choi 2011; Kisfalvi 2002). Moving away from this research emphasizing the role of individual entrepreneurs in decision-making process, our results are in line with those of some recent articles that it is the top management team of the small firm rather than the entrepreneur that make crucial decisions (Chowdhury 2005; Lechler 2001; West 2007). Viewed in this light, the findings of the present research argue that when it comes to evaluation of critical opportunities, it is entrepreneurial teams, rather than sole individuals, who have to implement analytical group decision-making processes. This is what the strategic decision-making process literature would posit, hence enriching the entrepreneurship field. This result is however derived from activities of small firms, and so, it complements the strategic decision-making process field that has emphasized the activities of large organizations.

Conclusions

The findings of this study inform the entrepreneurship literature as they provide evidence in favor of the implementation of DR in strategic decisions of the entrepreneurial firm. Extending the current opportunity literature, we investigated what happens after major opportunities have been identified and, seemingly, for the first

time made a plea for top management teams rather than individual entrepreneurs to act rationally (analytically) when evaluating these opportunities. Also, the current study contributes to the understanding of the appropriate strategic decision-making context that facilitates EO. Viewed in this light, it enlightens the entrepreneurship literature that makes pleas for such contextual investigations (Covin, Green, and Slevin 2006).

In relation to the international entrepreneurship field, the employment of the bounded rationality concept in entrepreneurial firms follows the pleas that related concepts and theories have to be included to a higher extent to explicate enterprise internationalization (Coviello, McDougall, and Oviatt 2011; Jones, Coviello, and Tang 2011). This also addresses the request that strategic decision-making concepts should be used in major decisions of internationalized firms (Dimitratos et al. 2011; Nielsen and Nielsen 2011).

Managers of entrepreneurial firms are advised to involve analytical processes in strategic decision-making. The findings suggest that investing resources, effort, and time to collect and scrutinize information when making strategic decisions in these enterprises does not “create waste,” but is a valuable activity. Such a systematic analysis of critical opportunities facilitates the benefits of EO by enabling top managers to evaluate effectively major opportunities identified.

A limitation of the present research that future studies can address refers to the fact that it occurred at a single point in time. Such an examination cannot uncover cause-and-effect associations between variables. The investigation of the moderating effect of DR on the EO-IP relationship may benefit from a longitudinal research design. In addition, given that this research did not occur at the time strategic decisions were made to actually observe the decision-making process might introduce recall bias to the findings. Future study is likely to use techniques including experimental design and simulation to possibly overcome this bias.

References

- Adner, R., and D. Snow (2010). “Old Technology Responses to New Technology Threats: Demand Heterogeneity and Technology Retreats,” *Industrial and Corporate Change* 19, 1655–1675.
- Aharoni, Y. (2010). “Behavioural Elements in Foreign Direct Investments,” *Advances in International Management* 23, 73–111.
- Aharoni, Y., L. Tihanyi, and B. L. Connelly (2011). “Managerial Decision-Making in International Business: A Forty-Five-Year Retrospective,” *Journal of World Business* 46, 135–142.
- Aiken, L. S., and S. G. West (1991). *Multiple Regression: Testing and Interpreting Interactions*. London: Sage.
- Allinson, C. W., E. Chell, and J. Hayes (2000). “Intuition and Entrepreneurial Behaviour,” *European Journal of Work and Organizational Psychology* 9(1), 31–43.
- Anderson, P. A. (1983). “Decision Making by Objection and the Cuban Missile Crisis,” *Administrative Science Quarterly* 28, 201–222.
- Anokhin, S., J. Wincent, and E. Autio (2011). “Operationalizing Opportunities in Entrepreneurship Research: Use of Data Envelopment Analysis,” *Small Business Economics* 37, 39–57.
- Armstrong, J. C., and T. Overton (1977). “Estimating Non-Response Bias in Mail Surveys,” *Journal of Marketing Research* 14(8), 396–402.
- Baron, R. M., and D. A. Kenny (1986). “The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic and Statistical Considerations,” *Journal of Personality and Social Psychology* 51, 1173–1181.
- Bausch, A., and M. Krist (2007). “The Effect of Context Related Moderators on the Internationalization-Performance Relationship: Evidence from Meta-Analysis,” *Management International Review* 47(3), 319–347.
- Brinckmann, J., D. Grichnik, and D. Kapsa (2010). “Should Entrepreneurs Plan or Just Storm the Castle? A Meta-Analysis on Contextual Factors Impacting the Business Planning-Performance Relationship in Small Firms,” *Journal of Business Venturing* 25, 24–40.
- Buckley, P. J., T. M. Devinney, and J. J. Louviere (2007). “Do Managers Behave the Way Theory Suggests? A Choice-Theoretic Examination of Foreign Direct Investment Location Decision-Making,” *Journal of International Business Studies* 38, 1069–1094.
- Cadogan, J. W. (2010). “Comparative, Cross-Cultural and Cross-National Research: A

- Comment on Good and Bad Practice,” *International Marketing Review* 27, 601–605.
- Cadogan, J. W., O. Kuivalainen, and S. Sundqvist (2009). “Export Market-Oriented Behavior and Export Performance: Quadratic and Moderating Effects Under Differing Degrees of Market Dynamism and Internationalization,” *Journal of International Marketing* 17(4), 71–89.
- Chang, S.-J., A. Van Witteloostuijn, and E. Lorraine (2010). “From the Editors: Common Method Variance in International Business Research,” *Journal of International Business Studies* 41, 178–184.
- Chiles, T., A. Bluedorn, and V. Gupta (2007). “Beyond Creative Destruction and Entrepreneurial Discovery: A Radical Austrian Approach to Entrepreneurship,” *Organization Studies* 28, 467–493.
- Chowdhury, S. (2005). “Demographic Diversity for Building an Effective Entrepreneurial Team: Is It Important?,” *Journal of Business Venturing* 20, 727–746.
- Chwolka, A., and M. Raith (2012). “The Value of Business Planning Before Start-Up: A Decision-Theoretical Perspective,” *Journal of Business Venturing* 27, 385–399.
- Contractor, F., S. Kundu, and C. Hsu (2003). “A Three-Stage Theory Of International Expansion: The Link Between Multinationality and Performance in the Service Sector,” *Journal of International Business Studies* 34, 5–18.
- Coombs, J. E., F. Sadrieh, and M. Annavarjula (2009). “Two Decades of International Entrepreneurship Research: What Have We Learned—Where Do We Go from Here?,” *International Journal of Entrepreneurship* 13, 23–64.
- Coviello, N. E., P. P. McDougall, and B. M. Oviatt (2011). “The Emergence, Advance and Future of International Entrepreneurship Research,” *Journal of Business Venturing* 26, 625–631.
- Covin J. G. and T. J. Covin (1990). “Competitive Aggressiveness, Environmental Context and Small Firm Performance.” *Entrepreneurship Theory and Practice* 14(4), 35–50.
- Covin, J. G., and D. Miller (2014). “International Entrepreneurial Orientation: Conceptual Considerations, Research Themes, Measurement Issues, and Future Research Directions,” *Entrepreneurship Theory and Practice* 37, 11–44.
- Covin, J. G., K. M. Green, and D. P. Slevin (2006). “Strategic Process Effects on the Entrepreneurial Orientation-Sales Growth Rate Relationship,” *Entrepreneurship Theory and Practice* 30, 57–81.
- Cyert, R. M., and J. G. March (1963). *A Behavioral Theory of the Firm*. Englewood Cliffs, NJ: Prentice-Hall.
- Dean, J. W. Jr., and M. P. Sharfman (1993). “Procedural Rationality in the Strategic Decision-Making Process,” *Journal of Management Studies* 30(4), 587–610.
- Dean, J. W. Jr., and M. P. Sharfman (1996). “Does Decision Process Matter? A Study of Strategic Decision Making Effectiveness,” *Academy of Management Journal* 39, 368–396.
- Dimitratos, P., A. Petrou, E. Plakoyiannaki, and J. E. Johnson (2011). “Strategic Decision-Making Processes in Internationalization: Does National Culture of the Focal Firm Matter?,” *Journal of World Business* 46, 194–204.
- Eckhardt, J., and S. Shane (2003). “Opportunities and Entrepreneurship,” *Journal of Management* 29, 333–349.
- Eisenhardt, K. M. (1997). “Strategic Decisions and All That Jazz,” *Business Strategy Review* 8, 1–3.
- Elbanna, S. (2006). “Strategic Decision Making: Process Perspectives,” *International Journal of Management Reviews* 8(1), 1–20.
- Elbanna, S., and J. Child (2007). “The Influence of Decision, Environmental and Firm Characteristics on the Rationality of Strategic Decision-Making,” *Journal of Management Studies* 44, 561–591.
- Elbanna, S., J. Child, and M. Dayan (2013). “A Model of Antecedents and Consequences of Intuition in Strategic Decision-Making: Evidence from Egypt,” *Long Range Planning* 46, 149–176.
- Escriba-Esteve, A., L. Sanchez-Peinado, and E. Sanchez-Peinado (2008). “Moderating Influences on the Firm’s Strategic Orientation-Performance Relationship,” *International Small Business Journal* 26, 463–489.
- Fornell, C., and D. F. Larcker (1981). “Evaluating structural Equation Models with Unobservable Variables and Measurement Error,” *Journal of Marketing Research* 18, 39–50.
- Frank, H., A. Kessler, and M. Fink (2010). “Entrepreneurial Orientation and Business Performance—A Replication Study,” *Schmalenbach Business Review* 62, 175–198.

- Fredrickson, J. W., and T. R. Mitchell (1984). "Strategic Decision Processes: Comprehensiveness and Performance in an Industry with an Unstable Environment," *Academy of Management Journal* 27, 399–423.
- Goll, I., and A. A. Rasheed (1997). "Rational Decision-Making and Firm Performance, the Moderating Role of Environment," *Strategic Management Journal* 18, 583–591.
- Grant, J. H., and W. R. King (1979). "Strategy Formulation: Analytical Models," in *Strategic Management: A New View of Business Policy and Planning*. Eds. D. E. Schendel and C. W. Hofer. Boston, MA: Little Brown, 104–122.
- Greer, C. R., and G. K. Stephens (2001). "Escalation of Commitment: A Comparison of Differences Between Mexican and U.S. Decision-Makers," *Journal of Management* 27, 51–78.
- Groves, K., C. Vance, and D. Choi (2011). "Examining Entrepreneurial Cognition: An Occupational Analysis of Balanced Linear and Nonlinear Thinking and Entrepreneurship Success," *Journal of Small Business Management* 49, 438–466.
- Hair, J. F., R. E. Jr. Anderson, R. L. Tatham, and W. C. Black (1998). *Multivariate Data Analysis*, 5th ed. Upper Saddle River, NJ: Prentice Hall.
- Hammedi, W., A. C. R. van Riel, and Z. Sasovova (2011). "Antecedents and Consequences of Reflexivity in New Product Idea Screening," *Journal of Product Innovation Management* 28, 662–679.
- Hofstede, G. (2013) National Culture. Retrieved April 10, 2013 from <http://www.geert-hofstede.com>.
- Hu, L.-T., and P. Bentler (1999). "Cutoff criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria versus New Alternatives," *Structural Equation Modelling* 6(1), 1–55.
- Hult, G. T. M., D. J. Ketchen, D. A. Jr. Griffith, B. R. Chabowski, M. K. Hannan, B. J. Dykes, W. A. Pollitte, and S. T. Cavusgil (2008). "An Assessment of the Measurement of Performance In International Business Research," *Journal of International Business Studies* 39, 1064–1080.
- Hutzschenreuter, T., T. Pedersen, and H. W. Volberda (2007). "The Role of Path Dependency and Managerial Intentionality: A Perspective on International Business Research," *Journal of International Business Studies* 38, 1055–1068.
- Johanson, J., and J.-E. Vahlne (1977). "The Internationalization Process of the Firm: A Model of Knowledge Development and Increasing Foreign Market Commitments," *Journal of International Business Studies* 8(1), 23–32.
- Johnson, T. P. (1998). "Approaches to Equivalence in Cross-Cultural and Cross-National Survey Research," *ZUMA-Nachrichten* 12, 1–34.
- Jones, M. V., N. Coviello, and Y. K. Tang (2011). "International Entrepreneurship Research (1989–2009): A Domain Ontology and Thematic Analysis," *Journal of Business Venturing* 26, 632–659.
- Khandwalla, P. N. (1977). *The Design of Organizations*. New York, NY: Harcourt Bruce Jovanovich.
- Kisfalvi, V. (2002). "The Entrepreneur's Character, Life Issues, and Strategy Making: A Field Study," *Journal of Business Venturing* 17, 489–518.
- Klingebiel, R., and A. De Meyer (2013). "Becoming Aware of the Unknown: Decision Making During the Implementation of a Strategic Initiative," *Organization Science* 24, 133–153.
- Kor, Y. Y., J. T. Mahoney, and S. C. Michael (2007). "Resources, Capabilities and Entrepreneurial Perceptions," *Journal of Management Studies* 44, 1187–1212.
- Kumar, N., L. W. Stern, and J. C. Anderson (1993). "Conducting Interorganizational Research Using Key Informants," *Academy of Management Journal* 96, 1633–1651.
- Lechler, T. (2001). "Social Interaction: A Determinant of Entrepreneurial Team Venture Success," *Small Business Economics* 16, 263–278.
- Liesch, P., and G. Knight (1999). "Information Internationalization and Hurdle Rates in Small and Medium Enterprise Internationalization," *Journal of International Business Studies* 30, 383–394.
- Lumpkin, G. T., and G. D. Dess (1996). "Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance," *Academy of Management Review* 21, 135–172.
- Lumpkin, G. T., and G. G. Dess (2001). "Linking Two Dimensions of Entrepreneurial Orientation to Firm Performance: The Moderating Role of Environment and Industry Life Cycle," *Journal of Business Venturing* 16, 429–451.

- Luo, Y., and M. W. Peng (1999). "Learning to Compete in a Transition Economy: Experience, Environment, and Performance," *Journal of International Business Studies* 30, 269–296.
- McDougall, P. P., and B. M. Oviatt (2000). "International Entrepreneurship: The Intersection of Two Research Paths," *Academy of Management Journal* 43, 902–908.
- Meyer, J. (2013) The "Irrational" World of the Entrepreneur. Retrieved April 15, 2013 from <http://growingbusiness.co.uk>.
- Miller, D., and P. H. Friesen (1982). "Innovation in Conservative and Entrepreneurial Firms: Two Models of Strategic Momentum," *Strategic Management Journal* 3, 1–25.
- (1984). *Organizations: A Quantum View*. Englewood Cliffs, NJ: Prentice-Hall.
- Miller, K. D. (2007). "Risk and Rationality in Entrepreneurial Processes," *Strategic Entrepreneurship Journal* 1, 57–74.
- Moen, O. (1999). "The Relationship Between Firm Size, Competitive Advantages and Export Performance Revisited," *International Small Business Journal* 18(1), 53–71.
- Naman, J. L., and D. P. Slevin (1993). "Entrepreneurship and the Concept of Fit: A Model and Empirical Tests," *Strategic Management Journal* 14, 137–153.
- Nielsen, B. B., and S. Nielsen (2011). "The Role of Top Management Team International Orientation in International Strategic Decision-Making: The Choice of Foreign Entry Mode," *Journal of World Business* 46, 185–193.
- Oviatt, B. M., and P. P. McDougall (2005). "Defining International Entrepreneurship and Modeling the Speed of Internationalization," *Entrepreneurship Theory and Practice* 29, 537–554.
- Papadakis, V. M., S. Lioukas, and D. Chambers (1998). "Strategic Decision-Making Process: The Role of Management and Context," *Strategic Management Journal* 19, 115–147.
- Podsakoff, P. M., S. B. MacKenzie, J. Y. Lee, and N. P. Podsakoff (2003). "Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies," *Journal of Applied Psychology* 88, 879–903.
- Priem, R. L., A. M. A. Rasheed, and A. G. Kotulic (1995). "Rationality in Strategic Decision Processes, Environmental Dynamism and Firm Performance," *Journal of Management* 21, 913–929.
- Rauch, A., J. Wiklund, G. T. Lumpkin, and M. Frese (2009). "Entrepreneurial Orientation and Business Performance: An Assessment of Past Research and Suggestions for the Future," *Entrepreneurship Theory and Practice* 33, 761–787.
- Ryan, A. M., D. Chan, R. E. Ployhart, and L. A. Slade (1999). "Employee Attitude Surveys in a Multinational Organization: Considering Language and Culture in Assessing Measurement Equivalence," *Personnel Psychology* 52, 37–58.
- Sarasvathy, S., N. Dew, S. Velamuri, and S. Venkataraman (2003). "Three Views of Entrepreneurial Opportunity," in *Handbook of Entrepreneurship Research: An Interdisciplinary Survey and Introduction*. Eds. Z. Acs and D. Audretsch. New York, NY: Springer, 141–160.
- Sarasvathy, S. D. (2001). "Causation and Effectuation: Toward a Theoretical Shift from Economic Inevitability to Entrepreneurial Contingency," *Academy of Management Review* 26, 243–263.
- Schaffer, B. S., and C. M. Riordan (2003). "A Review of Cross-Cultural Methodologies for Organizational Research: A Best-Practices Approach," *Organizational Research Methods* 6(2), 169–215.
- Shane, S. (2003). *A General Theory of Entrepreneurship: The Individual Opportunity Nexus*. Cheltenham: Edward Elgar.
- (2012). "Reflections on the 2010 AMR Decade Award: Delivering on the Promise of Entrepreneurship as a Field of Research," *Academy of Management Review* 37, 10–20.
- Shane, S., and F. Delmar (2004). "Planning for The Market: Business Planning Before Marketing and the Continuation of Organization Efforts," *Journal of Business Venturing* 19, 767–785.
- Shoham, A. (1999). "Bounded Rationality, Planning, Standardization of International Strategy, and Export Performance: A Structural Model Examination," *Journal of International Marketing* 7(2), 24–50.
- Shortell, S. M., and E. J. Zajac (1990). "Perceptual and Archival Measures of Miles and Show's Strategic Types: A Comprehensive Assessment of Reliability and Validity," *Academy of Management Journal* 33, 817–832.
- Simon, H. A. (1947). *Administrative Behavior*. New York, NY: Macmillan.
- (1957). *Models of Man: Social and Rational*. New York, NY: John Wiley & Sons.

- (1978). "Rationality As Process and Product of Thought," *Journal of the American Economic Association* 68, 1–16.
- Slater, S. F., and J. C. Narver (1995). "Market Orientation and the Learning Organization," *Journal of Marketing* 59(3), 63–74.
- Slevin, D. P., and S. A. Terjesen (2011). "Entrepreneurial Orientation: Reviewing Three Papers and Implications for Further Theoretical and Methodological Development," *Entrepreneurship Theory and Practice* 35, 973–987.
- Spanos, Y. E., and S. Lioukas (2001). "An Examination into the Causal Logic of Rent Generation: Contrasting Porter's Competitive Strategy Framework and the Resource-Based Perspective," *Strategic Management Journal* 22, 907–934.
- Steenkamp, J. E. M., and H. Baumgartner (1998). "Assessing Measurement Invariance in Cross-Cultural Research," *Journal of Consumer Research* 25(1), 78–107.
- Sullivan, D. (1994). "Measuring the Degree of Internationalization of a Firm," *Journal of International Business Studies* 25, 325–342.
- Tabachnick, B. G., and L. S. Fidell (2001). *Using Multivariate Statistics*. Boston: Allyn and Bacon.
- Thorgren, S., J. Wincent, and D. Örtqvist (2012). "Unleashing Synergies in Strategic Networks of SMEs: The Influence of Partner Fit on Corporate Entrepreneurship," *International Small Business Journal* 30, 453–471.
- Venkataraman, S., S. Sarasvathy, N. Dew, and W. Forster (2012). "Reflections on the 2010 AMR Decade Award: Whither the Promise? Moving Forward with Entrepreneurship As a Science of the Artificial," *Academy of Management Review* 37, 21–33.
- Venkataraman, N. (1989). "Strategic Orientation of Business Enterprises: The Construct, Dimensionality, and Measurement," *Management Science* 35, 942–962.
- Venkataraman, N., and V. Ramanujam (1986). "Measurement of Business Performance in Strategy Research: A Comparison of Approaches," *Academy of Management Review* 11, 801–814.
- Wali, A. (2013) The (ir)Rationality of Entrepreneurship. Retrieved April 20, 2013 from <http://www.adilwali.com/entrepreneurship>.
- Walter, J., F. W. Kellermanns, and C. Lechner (2012). "Decision Making within and Between Organizations: Rationality, Politics, and Alliance Performance," *Journal of Management* 38, 1582–1610.
- Welter, F. (2011). "Contextualizing Entrepreneurship—Conceptual Challenges and Ways Forward," *Entrepreneurship Theory and Practice* 35, 165–184.
- Wennberg, K., and C. Holmquist (2008). "Problemistic Search and International Entrepreneurship," *European Management Journal* 26, 441–454.
- West, G. P., III (2007). "Collective Cognition: When Entrepreneurial Teams, Not Individuals, Make Decisions," *Entrepreneurship Theory and Practice* 31, 77–102.
- Wheeler, C., K. Ibeh, and P. Dimitratos (2008). "UK Export Performance Research: Review and Implications," *International Small Business Journal* 26, 207–239.
- Wiklund, J., and D. Shepherd (2003). "Knowledge-Based Resources, Entrepreneurial Orientation, and the Performance of Small and Medium-Sized Businesses," *Strategic Management Journal* 24, 1307–1314.
- Zhou, L., B. R. Barnes, and Y. Lu (2010). "Entrepreneurial Proclivity, Capability Upgrading and Performance Advantages of Newness Among International New Ventures," *Journal of International Business Studies* 41, 882–905.

Appendix

Measures (and tests of unidimensionality for the overall sample) conducting exploratory factor analysis (EFA)^a

	Variables				
	Entrepreneurial Orientation	International Performance	Rationality	Dynamism	Hostility
Sales level	0.248	0.688	0.190	-0.040	0.210
Market share	0.264	0.694	0.185	-4.65E-006	0.231
Return on investment	-0.038	0.879	0.076	0.060	-0.167

Appendix: Continued

	Variables				
	Entrepreneurial Orientation	International Performance	Rationality	Dynamism	Hostility
Profitability	-0.085	0.824	0.074	0.088	-0.316
Overall satisfaction with performance relative to objectives set	0.113	0.815	0.183	-0.062	0.022
Favors the marketing of tried and tested products versus research and development, technological leadership, and innovations	0.600	-0.030	0.080	0.308	-0.246
Favors very few product introductions versus very many product introductions	0.641	-0.099	-0.007	0.245	-0.253
Favors minor changes in product or service lines versus major changes in product or service lines	0.700	0.137	-0.054	0.055	-0.108
Favors low-risk projects versus high-risk projects	0.643	-0.031	0.229	0.183	0.160
Favors incremental-ranging behaviors versus wide-ranging behaviors	0.688	0.065	0.260	-0.024	0.021
Follows the moves of the competitors versus initiates the moves of the competitors	0.718	-0.006	0.114	0.110	-0.012
Seldom introduces new products versus often introduces new products	0.737	0.232	0.122	0.043	0.155
Follows a "live-and-let-live" posture versus an "undo-the-competitors" posture	0.763	0.055	0.022	0.122	0.255
Search relevant information (regarding competition, industry trends, customers, suppliers, and collaborating firms at home or abroad) in making decisions	0.175	0.121	0.864	0.121	-0.064
Analyze relevant information (regarding competition, industry trends, customers, suppliers, and collaborating firms at home or abroad) before making decisions	0.111	0.101	0.883	0.074	-0.054
Use quantitative techniques (e.g., budgeting) in making decisions	0.016	0.165	0.707	-0.071	0.125
Are effective in taking into consideration relevant information (regarding competition, industry trends, customers, suppliers, and collaborating firms at home or abroad)	0.165	0.123	0.741	0.137	0.044
The firm rarely changes its competitive practices to keep up with the market and competitors versus the firm must change its competitive practices extremely frequently (e.g., semiannually)	0.294	0.125	0.129	0.660	0.085
The rate at which products/services are becoming obsolete in the industry is very slow (as in e.g., basic metal-like copper) versus the rate of obsolescence is very high (as in e.g., fashion goods and semiconductors)	0.259	0.008	0.057	0.711	0.081
Actions of competitors are quite easy to predict (as in some primary industries) versus actions of competitors are unpredictable	-0.034	-0.079	-0.002	0.613	0.024
The production/service technology is not subject to very much change and is well established (e.g., in steel production) versus the modes of production/service change often and in a major way (e.g., advanced electronic components)	.110	0.069	0.070	0.756	0.120
Very safe, little threat to the survival and well-being of the firm versus very risky, one false step can mean the firm's undoing	0.116	-0.158	0.148	0.246	0.768
An environment that the firm can control and manipulate to its own advantage, such as a dominant firm faces in an industry with little competition and few hindrances versus a dominating environment in which the firm's initiatives count for little against the tremendous political, technological, and competitive forces	-0.239	0.001	-0.141	0.222	0.670

Values in bold present the items with high factor loadings on the corresponding factor.

Extraction method: principal component analysis.

Rotation method: Varimax with Kaiser normalization.

^aWith the exception of the international performance variable, in all variables, we dropped one item to adapt the original scales taking into account the idiosyncrasy of our sample. Specifically, in entrepreneurial orientation we dropped the item "Favors cautious decisions versus bold decisions in international markets"; in decision rationality, the item "Characterize the whole decision-making process as intuitive"; in environmental dynamism, the item "Demand and customer preferences are fairly easy to forecast (e.g., milk companies) versus demand and customer preferences are almost unpredictable (e.g., high fashion goods)"; and in environmental hostility, the item "Rich in investment and marketing opportunities versus very stressful, exacting, hostile, very hard to keep afloat." These items present low factor loadings (below 0.500) in both EFA and CFA. The remaining items present high factor loadings (above 0.500) while they also load lower on other factors than the threshold of 0.320 that Tabachnick and Fidell (2001) reported to be a good rule of thumb for the minimum cross-loading of an item.

Measures (and tests of unidimensionality for the overall sample) conducting Confirmatory Factor Analysis (CFA).

Construct (Source)	Items	First-Order Factor Loadings
International Performance Sullivan (1994)	Please rate the firm's international performance compared with that of your direct competitors over the past three years in terms of (1 = much inferior; 5 = much superior):	
	Sales level	0.791 ^a
	Market share	0.814
	Return on investment	0.831
	Profitability	0.750
	Overall satisfaction with performance relative to objectives set	0.753
Model summary statistics: $\chi^2 (5) = 3.245$; $p < .001$; CFI = 0.994; NNFI = 0.997; SRSR = 0.024; RMSEA = 0.015		

All loadings are significant at $p < .01$.

^aLoading fixed to 1 for identification purposes.

	Items	
Entrepreneurial Orientation	Please rate the extent to which the firm in the international marketplace (1 = the first sentence is valid; 5 = the second sentence is valid):	
	Favors the marketing of tried and tested products versus research and development, technological leadership, and innovations	0.690 ^a
Innovativeness	Favors very few product introductions versus very many product introductions	0.701
Miller and Friesen (1982)	Favors minor changes in product or service lines versus major changes in product or service lines	0.639
Risk Attitude	Favors low-risk projects versus high-risk projects	0.653
Naman and Slevin (1993)	Favors incremental-ranging behaviors versus wide-ranging behaviors	0.671
Proactiveness	Follows the moves of the competitors versus initiates the moves of the competitors	0.798
Covin and Covin (1990)	Seldom introduces new products versus often introduces new products	0.797
	Follows a "live-and-let-live" posture versus an "undo-the-competitors" posture	0.797
Model summary statistics: $\chi^2 (20) = 100.99$; $p < .001$; CFI = 0.933; NNFI = 0.970; SRSR = 0.075; RMSEA = 0.054		

All loadings significant at $p < .01$.

^aLoading fixed to 1 for identification purposes.

Items		
Decision Rationality	Please rate the extent to which the management of the firm during the whole decision-making process in "key internationalization projects" . . . (1 = not at all; 5 = very much):	
	Search relevant information (regarding competition, industry trends, customers, suppliers, and collaborating firms at home or abroad) in making decisions	0.903 ^a
	Analyze relevant information (regarding competition, industry trends, customers, suppliers, and collaborating firms at home or abroad) before making decisions	0.924
	Use quantitative techniques (e.g., budgeting) in making decisions	0.661
Dean and Sharfman (1993)	Are effective in taking into consideration relevant information (regarding competition, industry trends, customers, suppliers, and collaborating firms at home or abroad)	0.668
Model summary statistics: $\chi^2 (2) = 6.652$; $p = .036$; CFI = 0.998; NNFI = 0.998; SRSR = 0.010; RMSEA = 0.006		

All loadings significant at $p < .01$.

^aLoading fixed to 1 for identification purposes.

Items		
Environment Dynamism	With regard to the environment in which the activities of your firm occur (1 = the first sentence is valid; 5 = the second sentence is valid):	
	The firm rarely changes its competitive practices to keep up with the market and competitors versus the firm must change its competitive practices extremely frequently (e.g., semiannually)	0.716 ^a
	The rate at which products/services are becoming obsolete in the industry is very slow (as in e.g., basic metal like copper) versus the rate of obsolescence is very high (as in e.g., fashion goods and semiconductors)	0.762
	Actions of competitors are quite easy to predict (as in some primary industries) versus actions of competitors are unpredictable	0.655
Miller and Friesen (1984)	The production/service technology is not subject to very much change and is well established (e.g., in steel production) versus the modes of production/service change often and in a major way (e.g., advanced electronic components)	0.737
Hostility	The environment within which your firm functions is (1 = the first sentence is valid; 5 = the second sentence is valid):	
	Very safe, little threat to the survival and well-being of the firm versus very risky, one false step can mean the firm's undoing	0.740 ^a
Khandwalla (1977)	An environment that the firm can control and manipulate to its own advantage, such as a dominant firm faces in an industry with little competition and few hindrances versus a dominating environment in which the firm's initiatives count for little against the tremendous political, technological, and competitive forces	0.631
Model summary statistics: $\chi^2 (13) = 33.222$; $p = .002$; CFI = 0.904; NNFI = 0.900; SRSR = 0.067; RMSEA = 0.055		

All loadings significant at $p < .01$.

^aLoading fixed to 1 for identification purposes.

Two Decades of Sustainability Management Tools for SMEs: How Far Have We Come?*

by Matthew P. Johnson and Stefan Schaltegger

Many scholars have emphasized the importance of sustainability management in small and medium-sized enterprises (SMEs). Although various publications discuss different approaches and potential barriers of implementation, a review of the existing research on sustainability management tools for SMEs is nonetheless missing. Based on a systematic review of the academic literature, this paper discusses reasons why SMEs should implement sustainability management tools. A further analysis reveals that most such tools are perceived to have little to no implementation in SMEs. The main implementation barriers and facilitating criteria are discussed. In addition, implications for future research, SME management, and public policy are drawn.

Introduction

Visions and strategies of corporate sustainability are important, but if environmental and social sustainability are to become truly effective in everyday business practice, they have to be operationalized. One main aspect of the operationalization of corporate sustainability is the implementation of management instruments, concepts, and systems, also known as sustainability management tools. This encompasses a broad range of environmental, social, and integrative tools, such as environmental and social audits, eco-efficiency analyses, life-cycle assessments (LCAs), environmental and social management systems, and sustainability reports.

Research has certainly come a long way since Thompson and Smith (1991) conducted an analysis of the limited academic literature on corporate social responsibility (CSR) in small businesses. Over the past two decades, sustainability management tools, including tools for CSR and environmental management, and their proposed implementation in small and medium-sized enterprises (SMEs) have been increasingly addressed in the academic literature (Ammenberg and Hjelm 2003; Graafland, van de Ven, and Stoffele 2003; Hillary 2004; Lawrence et al. 2006; Perrini and Tencati 2006; Perrini, Russo, and Tencati 2007; Seiffert 2008; Zorpas 2010).

Several authors have examined a range of these tools in SMEs in different regions. For

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example, Starkey (2000) examined a list of environmental management tools for European SMEs. Other authors have conducted country-specific investigations. Graafland, van de Ven, and Stoffele (2003) analyzed a series of CSR strategies and compatible tools between small and large Dutch firms. Tencati, Perrini, and Pogutz (2004) studied similar CSR tools in Italian SMEs. Furthermore, several SME-specific approaches to sustainability management have been developed. Based on previous findings, Perrini and Tencati (2006) developed an SME-specific tool, *sustainability evaluation and reporting system* (SERS), which covers a systematic approach to gradually implement sustainability management practices. Burke and Gaughran (2007) provided a conceptual model to incrementally integrate an environmental management system (EMS) along with sustainability reporting in SMEs.

Although research is gaining momentum in this academic field, a review of the existing literature on the proposed implementation of sustainability management tools in SMEs is nonetheless missing. Questions pertaining to the design and applicability of such tools in SMEs remain under-researched. Therefore, this paper conducts a systematic review of the extant academic literature to investigate which sustainability management tools have been designed for SMEs and what is known about the applicability of sustainability management tools proposed for SMEs. The synthesized results on specific tool designs, on barriers for implementation, and on facilitating criteria required to improve the applicability and dissemination of tools provide additional insights that complement the previous literature and offer suggestions for future research in this field.

The paper is structured as follows. The second section provides a background on corporate sustainability and the importance of management tools. The third section explains the methodological approach of the systematic literature review and reveals the initial findings of the analysis. The three subsequent sections cover the four thematic areas of analysis from the selected literature, including the tools proposed for implementation and the reasons for implementation (fourth section), the barriers for implementation (fifth section), and the main facilitating criteria for the application of tools in SMEs (sixth section). The final two sections provide a discussion and outlook for future

research and SME management, followed by the conclusions.

Corporate Sustainability and Management Tools

A business approach to address sustainable development, also known as corporate sustainability, has gained substantial interest in management literature over the past 25 years. Since the Brundtland Commission definition of sustainable development, “development which meets the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations World Commission on Environment and Development 1987, p. 8), the term corporate sustainability has emerged and been defined many times (for an overview of definitions, see Gladwin, Kennelly, and Krause 1995; van Marrewijk 2003). Dyllick and Hockerts (2002) propose that corporate sustainability entails the integration of economic, ecological, and social aspects in an organization’s short and long-term planning. Schaltegger and Burritt (2005, p. 192) define corporate sustainability as “the contextual integration of economic, environmental and social aspects . . . and integrating environmental and social management in conventional economically oriented business management.”

In addition, a number of related concepts have been discussed in the extant literature, such as CSR (see e.g., Carroll 1999), corporate social performance (CSP; Wartick and Cochran 1985; Wood 1991), corporate social responsiveness (Frederick 1994), business ethics (Göbbels 2002), corporate citizenship (Matten and Crane 2005; Rondinelli and Berry 2000), corporate governance (Yoshikawa and Rasheed 2009), corporate philanthropy (Seelos and Mair 2005), social entrepreneurship (Leviner, Crutchfield, and Wells 2007; Seelos and Mair 2005), sustainable entrepreneurship (e.g., Schaltegger and Wagner 2011), environmental management and stakeholder management (for a review of these concepts, see van Marrewijk 2003).

These related notions mostly describe important facets and approaches for large corporations to address particular aspects of sustainable development; however, such terms can be applied to SMEs as well. In the context of business sustainability, the importance of SMEs to engage in sustainable activities has often been emphasized (Hahn and Scheermesser 2006; Williamson, Lynch-Wood, and Ramsay 2006). On one hand, SME engagement in

sustainability aspects derives from the concerns about their collective economic, environmental, and social impacts. Although SMEs positively contribute to economies and societies in various ways (e.g., providing millions of jobs and securing a high level of economic stability in many countries; Morsing and Perrini 2009), they also generate negative impacts from conducting business. It has been estimated that SMEs contribute up to 70 percent of global pollution collectively (Hillary 2000; Revell, Stokes, and Chen 2010). On the other hand, environmental and social concerns are also becoming central economic aspects for many SMEs (Halila 2007; Revell, Stokes, and Chen 2010). Pressing environmental and social matters, such as rising prices for energy and raw materials, cost savings through effective management of resources and waste reduction, and ensuring health and safety at the workplace, and pose significant challenges as well as great opportunities for businesses of all sizes.

Sustainability management entails the internal development of environmental and social measures, and the external contribution to sustainability in society and the economy (Bansal 2005; Schaltegger and Burritt 2005; Shrivastava and Hart 1995). Thus, sustainability management requires managers to measure and supervise this internal development, as well as to engage in a dialogue with external stakeholders on sustainable development issues (Kuhndt 2004).

A wide range of tools has been proposed in the literature for various functional areas (e.g., accounting tools, marketing tools, process management tools, etc.), as well as cross-functional support systems affecting the overall goals of an enterprise (Schaltegger et al. 2002). Although most of these tools were developed with large companies in mind, streamlined versions of tools removing processes of an existing tool (Weitz and Sharma 1998), or reversely, incorporating only several elements of a tool (Ahire and Golhar 1996), have been proposed for small businesses.

Sustainability management tools enable business managers to operationalize sustainability-oriented strategies and to coordinate the activities throughout an enterprise. Gladwin, Kennelly, and Krause (1995) point out that companies pursuing corporate sustainability will need practical decision-support tools to facilitate the design and selection of sustainable products, processes, and programs. In addition,

such management tools can also be useful in the process of organizational change and learning.

Sustainability management tools aim to support managers and entrepreneurs in various functions to find ways to reduce negative environmental and social impacts, exploit and manage positive impacts, and simultaneously stay competitive and economically successful. As various authors have emphasized (Epstein 2008; Gladwin, Kennelly, and Krause 1995; Kuhndt 2004; Robert 2000; Robert et al. 2002), well-organized sustainability management requires instruments and tools to measure, manage, and communicate sustainability issues effectively. Kuhndt (2004) has grouped these tools into three categories, including tools for analysis and evaluation (e.g., LCA), tools for action (e.g., EMS according to the ISO 14001 standard), and tools for communication (e.g., sustainability reporting). Although most tools are identified with overarching terms (e.g., sustainability report), variations in design (e.g., web-based or printed versions) and application (e.g., stand-alone reports or integrated annual reports) may exist in practice.

Various institutions and initiatives have created platforms, programs, and partnerships intended to raise awareness and support companies in the implementation of sustainability management tools in SMEs. In the United States, the Foundation Center (2011) has created the *Tools and Resources for Assessing Social Impact* (TRASI) online platform that provides organizations with a list of over 150 tools available for social accounting and social impact. In Austria, the EcoProfit public-private partnership initiative (Fresner 1998; Martinuzzi, Huchler, and Obermayr 2000) was created to support the implementation of environmental management in companies, which it has extended to 10 countries in more than 2,000 enterprises worldwide. Further awareness raising campaigns targeting SMEs include the Natural Step, developed in Sweden (Bradbury and Clair 1999; Holmberg 1998; Robert 2000), Envirowise in the United Kingdom (Coskeran and Phillips 2005; Gibson 2001), and the Green Network in Denmark (Lehmann 2006).

Nevertheless, a comprehensive overview of the academic literature on sustainability management tools for SMEs, including CSR management tools and environmental management tools, has not been conducted so far. In addition, fundamental questions pertaining to the widespread applicability of such tools in SMEs

remain under-researched. For this reason, the following sections examine the existing academic literature on the design, implementation and applicability of sustainability management tools in SMEs.

Methodology

The literature review was guided by the following research question: *What sustainability management tools, including tools for corporate social responsibility and tools for environmental management, have been designed for and are applicable to SMEs?* The subsequent analysis of the academic literature covered the following four thematic areas of investigation:

- Which specific sustainability management tools have been proposed and observed in SMEs?
- What reasons are provided why SMEs should implement sustainability management tools?
- What main reasons may explain why most SMEs are not implementing such management tools?
- What key criteria are emphasized in the literature that such management tools must fulfill in order to improve their applicability in SMEs?

Before these thematic areas of investigation are examined, this section will give details on how the literature review was conducted and provide the initial quantitative findings.

To answer these questions, the academic literature on sustainability management tools in SMEs was systematically reviewed and synthesized. According to Tranfield, Denyer, and Smart (2003), a systematic literature review consists of five methodological steps, including: (1) identification of keywords and creation of search strings based on the identified keywords; (2) selection of studies through relevant research databases; (3) analysis of identified papers based on inclusion and exclusion criteria; (4) data extraction into a reference management database (in this case, Excel); and (5) data synthesis and reporting. In the first step, keywords were identified and constructed into search strings. Based on our main research question, the following search strings were established (Table 1).

All search strings included an additional cluster of words to denote a tool, including

the term “tool” itself as well as “instrument,” “concept,” and “system.” For example, the first search string was written as “sustainability management” AND “small and medium-sized enterprise”—including the abbreviation “SME”—AND (“tool” OR “instrument” OR “concept” or “system”). Each search string was entered exactly the same way into the following six databases: EBSCO Business Source Premier, Emerald, JSTOR, Science Direct, Springer Link, and Wiley Online. In addition to these databases, a cross-check was conducted in Google Scholar in an attempt to find other influential academic publications outside of these databases. By doing so, additional journal articles and book chapters in edited volumes were identified.

In order to narrow down the vast amount of literature available, several inclusion and exclusion criteria were established, which is based on similar systematic review process refined by Moustaghfir (2008). For example, conference papers, working papers, technical reports, and practical handbooks were omitted from the search to focus on peer-reviewed academic papers. A complete list of inclusion/exclusion criteria is provided in Table 2.

When possible, the search strings were entered into the six databases using advanced search options and filters, such as searching strictly for peer-reviewed journal articles and book chapters. In order to find articles and papers in a wide range of journals, all the filters by subject (e.g., “business management” or “environmental sciences”) were included. The initial search of papers using the specific search strings resulted in 5,891 articles and papers. Browsing through titles and abstracts with the inclusion and exclusion criteria as a guide, a preliminary set of publications was identified. Most of the papers could be eliminated for further review because they did not relate to business management at all. This resulted in 216 publications addressing environmental and social issues as well as management tools in SMEs. The authors and titles of these retained papers were imported into an Excel spreadsheet, and the full papers were downloaded and reviewed by both authors. Thereafter, a full-text search was conducted within this preliminary set to exclude those papers that mention some of the keywords, but do not cover any of the four thematic areas of investigation. This resulted in a final count of 112 publications (Table 3).

Table 1
Search String Combinations for the Literature Search

Search String	Constant Terms in Every Search String
“Sustainability management” AND “small and medium-sized enterprise (SME)” AND. “tool”
“Sustainability management” AND “small business” AND. . .	OR
“Sustainability management” AND “family business” AND. . .	“instrument” OR
“Corporate social responsibility” AND “small and medium-sized enterprise (SME)” AND. . .	“concept” OR
“Corporate social responsibility” AND “small business” AND. . .	“system”
“Corporate social responsibility” AND “family business” AND. . .	
“Corporate citizenship” AND “small and medium-sized enterprise (SME)” AND. . .	
“Corporate citizenship” AND “small business” AND. . .	
“Corporate citizenship” AND “family business” AND. . .	
“Business ethics” AND “small and medium-sized enterprise (SME)” AND. . .	
“Business ethics” AND “small business” AND. . .	
“Business ethics” AND “family business” AND. . .	
“Environmental management” AND “small and medium-sized enterprise (SME)” AND. . .	
“Environmental management” AND “small business” AND. . .	
“Environmental management” AND “family business” AND. . .	
“Social management” AND “small and medium-sized enterprise (SME)” AND. . .	
“Social management” AND “small business” AND. . .	
“Social management” AND “family business” AND. . .	

SME, small and medium-sized enterprise.

Thereafter, these papers were examined methodically to derive the findings. All articles and papers included in the review were analyzed on two levels. First, a basic meta-analysis was conducted, indicating quantifiable statistics of each paper, including the publication year, publication type, journal type, research method applied, geographical location of the conducted survey/case study analysis (if any), and industry/sector of sample (if any). Second, a thematic analysis was carried out for every paper within the framework of the four areas of investigation, including: (1) the tools proposed for implementation; (2) the reasons for implementation in SMEs; (3) the barriers for implementation in SMEs; and (4) the facilitating criteria of tools for implementation in SMEs. The next two sections will highlight the main quantitative findings, as well as present

the results on the four thematic areas of investigation.

Initial Quantitative Findings

The initial quantitative findings provide an overview of the quantifiable statistics on the 112 publications reviewed, including the publication year, publication journal, research methods applied, and the geographical focus of SME research. For starters, the analysis of year published reveals a growing trend in publications over the past two decades (Figure 1).

Table 4 provides an overview of the academic journals that published on sustainability management tools for SMEs.

Surprisingly, a vast majority of identified publications (79 studies) can be found in sustainability management and ethics journals, whereas the topic is less discussed in both

Table 2
Inclusion and Exclusion Criteria for Literature Search

Criteria	Reason for Inclusion/Exclusion
Inclusion criteria	
Published articles/papers from 1991 to 2011	The scholarly works regarding SMEs and CSR/environmental management, starting with Thompson and Smith's (1991) article
Articles/papers in the English language	Most academic business journals are published in English.
Articles/papers address environmental and/or CSR issues	To ensure the term "sustainability" was applied to ecological and social issues versus only on economic or family-related issues
Articles/papers study management tools	To ensure the focus was on management tools dealing with sustainability management
Articles/papers focus on SMEs	To narrow the investigation on sustainability management tools proposed and designed for SMEs
Scholarly published articles/papers	To provide more rigorous arguments and to critically assess the applicability of tools in SMEs
Exclusion criteria	
Articles/papers do not address any of the four thematic areas, including application of tools, reasons for application, barriers to application, and tool criteria for SMEs	The purpose of this is to review the literature on applicability of tools in SMEs and reference has to be made to at least one of the four thematic areas of investigation
Conference papers, working papers, technical reports, and practical handbooks	To ensure quality and consistency in the comparative analysis, all articles/papers should be peer reviewed

CSR, corporate social responsibility; SME, small and medium-sized enterprise.

general management journals (15 studies) and SME journals (7 studies). This raises the question: Are sustainability and ethics researchers more concerned than small business and general management researchers on the subject of sustainability management tools in SMEs? Although this inquiry was not covered in the areas of investigation for this literature review, it is worth considering that future research could benefit from stronger collaboration between small business and sustainability researchers in this field.

Furthermore, the strong emphasis on academic literature in sustainability management and ethics journals suggests a more theoretical or conceptual focus of research on sustainability management tools for SMEs as opposed to a quantitative research approach.

However, an initial analysis of the research methods applied in the reviewed studies only partially confirms the expected strong theoretical perspective.

The spectrum of research methods applied on this subject area ranges from conceptual or theoretical studies to empirical studies (quantitative and qualitative methods). When sorting the studies according to the research methods applied, a distribution can be observed of 35 publications purely conceptual or theoretical in kind, and 77 being empirically supported (34 quantitative and 43 qualitative). Therefore, a good distribution of research methods can be found. The next three sections present the results of the four thematic areas of investigation, starting with the tools designed and proposed for SME implementation.

Table 3
Search Results, Fully Reviewed Papers, and Included Papers^a

Search strings	Search Hits from Journal Databases	Preliminary Set of Papers for Full Review	Included Papers
“Sustainability management” AND “small and medium-sized enterprise (SME)” AND T/I/C/S	40	15	8
“Sustainability management” AND “small business” AND T/I/C/S	66	10	4
“Sustainability management” AND “family business” AND T/I/C/S	8	2	2
“Corporate social responsibility” AND “small and medium-sized enterprise (SME)” AND T/I/C/S	307	35	27
“Corporate social responsibility” AND “small business” AND T/I/C/S	798	25	10
“Corporate social responsibility” AND “family business” AND T/I/C/S	155	7	1
“Corporate citizenship” AND “small and medium-sized enterprise (SME)” AND T/I/C/S	86	2	1
“Corporate citizenship” AND “small business” AND T/I/C/S	323	4	1
“Corporate citizenship” AND “family business” AND T/I/C/S	59	4	0
“Business ethics” AND “small and medium-sized enterprise (SME)” AND T/I/C/S	267	11	5
“Business ethics” AND “small business” AND T/I/C/S	1,044	15	1
“Business ethics” AND “family business” AND T/I/C/S	296	5	0
“Environmental management” AND “small and medium-sized enterprise (SME)” AND T/I/C/S	723	45	35
“Environmental management” AND “small business” AND T/I/C/S	1,374	25	15
“Environmental management” AND “family business” AND T/I/C/S	164	5	0
“Social management” AND “small and medium-sized enterprise (SME)” AND . . .	30	5	1
“Social management” AND “small business” AND T/I/C/S	104	1	1
“Social management” AND “family business” AND T/I/C/S	47	0	0
Totals	5,891	216	112

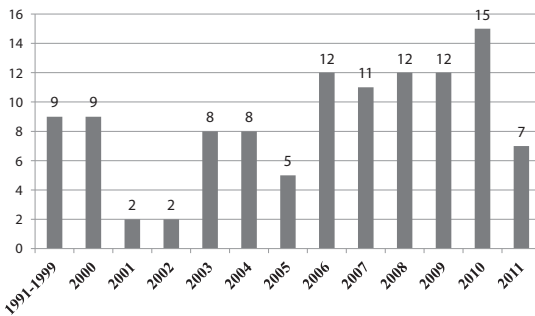
^aT/I/C/S stands for “tool OR Instrument OR Concept OR System,” which was included in each search string.

Overview of Tools and Reasons for SME Implementation

The thematic analysis covers four areas of investigation, including: (1) the tools proposed

for implementation; (2) the reasons for implementation of tools in SMEs; (3) the barriers for SME implementation; and (4) the facilitating criteria for SME implementation. This section discusses the first two areas of investigation

Figure 1
Number of Publications by Year
(1991–2011)



successively. Quite a few publications propose effective tools and give reasons why they should be implemented in SMEs. Even though Hillary (2004) provides a good categorization of benefits for implementation of an EMS, no overarching framework of reasons for implementation has prevailed in the reviewed literature. Therefore, this section summarizes the most frequently cited reasons. After the overview of the proposed tools and the main reasons for implementation are presented, this paper critically questions the widespread applicability of tools in SMEs.

Sustainability Management Tools Proposed for SMEs

A total of 26 sustainability management tools could be identified in the literature with direct reference to SMEs (Table 5). A strong emphasis is on EMS with 47 studies. The total number of 145 references to tools is higher than the total sum of publications reviewed, as 19 of the 112 publications made references to multiple tools.

As seen in Table 5, the majority of the reviewed studies concentrates on a single tool (93 of 112 publications), such as an EMS (e.g., Ammenberg and Hjelm 2003; Burke and Gaughran 2007; Fresner 2004; Gerrans and Hutchinson 2000; Hillary 2004; Zorpas 2010). As an exception, some studies cover multiple sustainability management tools. However, these studies only focus on a particular perspective of sustainability management, such as environmental management (e.g., Perez-Sanchez, Barton, and Bower 2003; Starkey 2000) or social management (e.g., Graafland, van de Ven, and

Stoffele 2003; Tencati, Perrini, and Pogutz 2004). Furthermore, the geographic focus of research is mostly centered on European SMEs (106 of 145 tools mentioned, as seen in Table 5).

One interpretation of the findings could be that sustainability management in SMEs appears to occur on a more general level (adopting systems and standards like EMS according to the ISO 14001 standard) and less on a specific level (applying specific instruments). However, the broad range of tools may also reflect the heterogeneity of SMEs requiring different kinds of sustainability management tools.

Reasons Provided Why Sustainability Management Tools Should be Implemented

Given the limited coverage of sustainability management tools in SME journals (exceptions are, for example, Jämsä et al. 2011), it is not surprising that the sustainability-minded scholars provide a more normative discussion why SMEs should implement these methods. The main reasons suggested in the literature are:

- *Managing legal compliance:* Tools can help SMEs to ensure proper legal compliance on environmental and social concerns, lower insurance costs through proven risk management techniques, and avoid future costs of noncompliance (Biondi, Frey, and Iraldo 2000; Gerstenfeld and Roberts 2000; Hillary 2004; Seiffert 2008).
- *Managing stakeholder relationships:* Tools can help SMEs improve communications with stakeholders and develop better relationships particularly with regulators and local administrative groups (Gadenne, Kennedy, and McKeiver 2009; Hillary 2004; Perrini and Tencati 2006; Russo and Tencati 2009; Sweeney 2007; Tencati, Perrini, and Pogutz 2004).
- *Reduction of complexity:* Tools allow companies to break down the complexities of sustainable development on a firm level and make it possible for them to measure their environmental and social performance (Burke and Gaughran 2007; Fresner and Engelhardt 2004; Perrini and Tencati 2006; Starkey 2000).
- *Evaluation and decision support:* Tools aid managers in their evaluation of environmental and social impacts, and make appropriate business decisions with this obtained information (Kuhndt 2004; Starkey 2000).

Table 4
Journals and Other Sources on Sustainability Management Tools for SMEs

Category	Journal	No.	Sum
SME journals			
	<i>Journal of Small Business Management</i>	5	
	<i>Journal of Small Business and Enterprise Development</i>	1	
	<i>International Small Business Journal</i>	1	
			7
Sustainability management and ethics journals			
	<i>Business Strategy and the Environment</i>	15	
	<i>Journal of Cleaner Production</i>	14	
	<i>Journal of Business Ethics</i>	13	
	<i>Corporate Social Responsibility and Environmental Management</i>	8	
	<i>Business Ethics: A European Review</i>	6	
	<i>Eco-Management and Auditing</i>	3	
	<i>Business and Society</i>	2	
	<i>Corporate Governance: An International Review</i>	2	
	<i>Environmental Research, Engineering and Management</i>	2	
	Other (e.g., <i>Journal of Environmental Management</i>)	14	
			79
General management journals			
	<i>Management Decision</i>	2	
	<i>Journal of Quality Management</i>	1	
	<i>R&D Management</i>	1	
	<i>TQM Magazine</i>	1	
	Other (e.g., <i>European Journal of International Management</i>)	10	
			15
Technology management journals			
	<i>Robotics and Computer-Integrated Manufacturing</i>	2	
	<i>Bioresource Technology</i>	1	
			3
Other publications			
	Book chapters in edited volumes		8
Overall total			112

SME, small and medium-sized enterprise.

- *Performance improvement:* Tools can help improve companies' sustainability performance through new environmental and social performance indicators, enhanced internal communication, and better overall awareness and understanding of business impacts on the environment and society (Ammenbergh and Hjelm 2003; Gerrans and Hutchinson 2000; Lefebvre, Lefebvre, and Talbot 2003; Perrini and Tencati 2006; Zorpas 2010).
- *Operationalization of strategies:* Tools help operationalize sustainability strategies through systematic approaches to implementing environmental, social, and integrated systems into an organization (Fresner and Engelhardt 2004; Friedman and Miles 2002; Kerr 2006; Parisi and Maraghini 2010; Seiffert 2008; Tencati, Perrini, and Pogutz 2004; Zobel 2007; Zorpas 2010).
- *Organizational learning and innovativeness:* Sustainability management tools, such

Table 5
Overview of Sustainability Management Tools Proposed for SMEs^a

Proposed Sustainability Management Tools	Number of Studies	Geographical Focus				
		Europe	AU & NZ	Asia	NSAM	Africa
1. Audit (environmental, social, or sustainable)	6	5	—	1	—	—
2. “Balance”	1	1	—	—	—	—
3. Benchmarking (environmental, social, or sustainable)	3	2	1	—	—	—
4. “Better Business Plan”	1	1	—	—	—	—
5. CSR Management	20	18	—	—	2	—
6. Dialogue (also Stakeholder Dialogue)	4	3	1	—	—	—
7. Eco-Efficiency Analysis	2	1	—	—	1	—
8. “Eco-Mapping”	2	2	—	—	—	—
9. “Efficient Entrepreneur Calendar”	1	—	—	—	1	—
10. Education (environmental, social or sustainability)	2	1	—	1	—	—
11. Environmental Cost Accounting	3	3	—	—	—	—
12. Environmental Management System (e.g., ISO 14001)	47	29	7	6	3	1
13. “EPM-KOMPAS”	1	1	—	—	—	—
14. Indicator (environmental, social, or sustainability)	2	2	—	—	—	—
15. Life Cycle Assessment	3	1	1	1	—	—
16. Networking (environmental, social, or sustainability)	6	4	2	—	—	—
17. Policy (environmental, social, or sustainability)	2	2	—	—	—	—
18. Public-Private Partnership (e.g., EcoProfit)	7	7	—	—	—	—
19. Quality Management System (e.g., EFQM)	11	7	2	1	1	—
20. Social Management System (e.g., SA 8000)	7	6	—	1	—	—
21. Supply Chain Management (green or sustainability)	3	2	—	1	—	—
22. “Sustainability Assessment for Enterprises”	1	1	—	—	—	—
23. Sustainability Balanced Scorecard	2	1	—	1	—	—
24. “Sustainability Evaluation and Reporting System”	1	1	—	—	—	—
25. Sustainability Reporting	6	4	—	—	2	—
26. “VerDEE”	1	1	—	—	—	—
Overall total	145	106	13	13	11	1

^aTools in quotation marks (e.g., “Balance”) refer to direct names of SME-specific tools. AU & NZ, Australia and New Zealand; NSAM, North and South America; SME, small and medium-sized enterprise.

as an environmental policy, can aid companies in organizational learning and foster innovation for sustainable products and services (Dibrell, Craig, and Hansen 2011; Hansen, Sextl, and Reichwald 2010).

Further reasons explaining the implementation of tools are related to external support programs. Numerous studies have observed that SMEs are responding well to external incentives, such as *public support programs and demands by larger customers along the supply chain*, for environmental protection and waste elimination, health and safety standards, and so on (Fresner and Engelhardt 2004; Halila 2007; Johansson 1997; Kerr 2006; Lee 2009; Moore and Manring 2009; Morsing and Perrini 2009). Since the beginning of the new millennium, many large focal corporations have mandated that their SME suppliers must adopt an EMS or to conduct social audits as a precondition to doing business (Fresner and Engelhardt 2004).

Furthermore, small business networks are opening their agendas to sustainability issues, which allow their SME members to *share knowledge and resources* that otherwise might not have been directly available to them (Ammenberg and Hjelm 2003; Collins et al. 2007; Halila 2007; Jämsä et al. 2011; Jenkins 2006; Lawrence et al. 2006). More formally, *strategic alliances may allow members to implement and maintain sustainability management tools*, such as a cooperative business approach to implementing an EMS (Seiffert 2008) and a community-based approach to CSR (Niehm, Swinney, and Miller 2008).

Applicability of the Proposed Tools

Various sustainability management tools have been observed in the literature to be applied by SMEs and/or have the potential to be applied by SMEs. Eight tools were found to be specifically designed for SME application (left-hand column in Table 6): *Balance* (Bull 2007); *Better Business Plan* (Friedman and Miles 2002); *Efficient Entrepreneur Calendar* (Cote, Booth, and Louis 2006); *Eco-Mapping* (Koroljova and Voronova 2007); *EPM-KOMPAS* (Günter and Kaulich 2005); *Sustainability Assessment for Enterprises* (SAFE; Kinderyte 2008), *Sustainability Evaluation and Reporting System* (SERS; Perrini and Tencati 2006), and *VerDEE* (Masoni et al. 2004). Most publications, however, propose generally developed tools

with regard to SMEs (right-hand column of Table 6). Most of this research investigates the applicability of generally developed tools in small companies. For example, an EMS according to the ISO 14001 standard has received a decent amount of attention in the literature, which is due to the fact that ISO 14001 was supposedly created also with small businesses in mind (Hillary 2004; Zorpas 2010).

Although many publications provide evidence that these generally developed tools could be implemented by a larger population of SMEs, a more thorough examination reveals that the number of tools *that have actually been implemented by many SMEs* is substantially less.

The list of tools becomes rather insignificant when considering the empirical evidence on *low implementation rates by SMEs*. Graafland, van de Ven, and Stoffele (2003) and Tencati, Perrini, and Pogutz (2004) conducted surveys with hundreds of SMEs in the Netherlands and Italy, respectively. Their findings revealed that most SME respondents in these countries did not apply the generally developed tools, which are typically implemented by larger enterprises.

When considering the *circumstances and conditions of implementation* at the time sustainability management tools have actually been implemented by SMEs, the methods of implementation reveal that the application in most cases can be linked to publically and/or externally funded projects. In some cases, researchers acted as promoters, encouraging the studied companies to implement tools. This finding calls to question if SMEs would be willing to apply sustainability management tools in the absence of support programs and other external incentives.

In brief, the existing literature dealing with sustainability management tools for SMEs creates mixed results. Most generally developed tools were created for large companies, whereas it remains uncertain if they are even applicable to SMEs (Graafland, van de Ven, and Stoffele 2003; Jenkins 2006; Lee 2009; Perrini and Tencati 2006; Thompson and Smith 1991). It has been debated which tools are most likely to be implemented by SMEs (Fresner and Engelhardt 2004; Tencati, Perrini, and Pogutz 2004). Some literature even argues that many sustainability management tools are not applicable to SMEs (Ammenberg and Hjelm 2003; Graafland, van de Ven, and Stoffele 2003; Lee 2009; Moore and Spence 2006; Perrini and

Table 6
Scope and Authors of Studies on Sustainability Management Tools in SMEs

SME-Specific Tools	Generally Developed Sustainability Management Tools for SMEs
<i>Balance</i> (Bull 2007)	<i>Audit</i> (Graafland, van de Ven, and Stoffele 2003; Miles, Munilla, and McClurg 1999; Perez-Sanchez, Barton, and Bower 2003; Starkey 2000; Williamson and Lynch-Wood 2001)
<i>Better Business Plan</i> (Friedman and Miles 2002)	<i>Benchmarking</i> (Altham 2007; Makrinou, Mandaraka, and Assimakopoulos 2008; Tencati, Perrini, and Pogutz 2004)
<i>Eco-Mapping</i> (Burke and Gaughran 2006; Koroljova and Voronova 2007; Perez-Sanchez, Barton, and Bower 2003)	<i>CSR Management</i> (Avram and Kühne 2008; Davies and Crane 2010; Fitzgerald et al. 2010; Gelbmann 2010; Jenkins 2009; Klein and Vorbohle 2010; Nielsen and Thomsen 2009; Perrini 2006; Perrini and Minoja 2008; Roberts, Lawson, and Nicholls 2006; Russo and Tencati 2009; Ryan, O'Malley, and O'Dwyer 2010; Spence and Lozano 2000; Spence, Schmidpeter, and Habisch 2003; Sweeney 2007; Tencati, Perrini, and Pogutz 2004; Thompson and Smith 1991; von Weltzien Høivik and Shankar 2011; Williamson, Lynch-Wood, and Ramsay 2006)
<i>Efficient Entrepreneur Calendar</i> (Cote, Booth, and Louis 2006)	<i>Dialogue</i> (Arnold 2010; Graafland, van de Ven, and Stoffele 2003; Hammann, Habisch, and Pechlaner 2009; Longo, Mura, and Bonoli 2005; Seidel et al. 2008)
<i>EPM-KOMPAS</i> (Günter and Kaulich 2005)	<i>Eco-Efficiency Analysis</i> (Cote, Booth, and Louis 2006; Starkey 2000)
<i>Sustainability Assessment for Enterprises</i> (Kinderyte 2008)	<i>Education</i> (Cloquell-Ballester et al. 2008; Tseng et al. 2010)
<i>Sustainability Evaluation and Reporting System</i> (Perrini and Tencati 2006)	<i>Environmental Cost Accounting</i> (Heupel and Wendisch 2003; Karvonen 2000; Wendisch and Heupel 2005)
<i>VerDEE</i> (Masoni et al. 2004)	<i>Environmental Management System</i> (Ammenberg and Hjelm 2003; Biondi, Frey, and Iraldo 2000; Brammer, Hojmosse, and Marchant 2012; Burke and Gaughran 2006, 2007; Bürgi 2011; Cassells, Lewis, and Findlater 2011; Chavan 2005; Copeland and Le Clue 1999; Fresner 2004; Fresner and Engelhardt 2004; Gadenne, Kennedy, and McKeiver 2009; Gerrans and Hutchinson 2000; Gerstenfeld and Roberts 2000; Graafland, van de Ven, and Stoffele 2003; Gunningham and Sinclair 2002; Hahn and Scheermesser 2006; Halila 2007; Heras and Arana 2010; Hicks and Dietmar 2007; Hillary 2004; Hutchinson and Chaston 1994; Ilomäki and Melanen 2001; Jenkins 2006; Jirillo, Rocchi, and Martucci 2003; Johannsson 1997; Kehbila, Ertel, and Brent 2009; Kürzinger 2004; Lee 2009; Lefebvre, Lefebvre, and Talbot 2003; McKeiver and Gadenne 2005; Majjala and Pohjola 2006; Masurel 2007; Miles, Munilla, and McClurg 1999; Neamtu 2011; O'Laire and Welford 1995; Perez-Sanchez, Barton, and Bower 2003; Petts 1998; Revell and Blackburn 2007; Revell, Stokes, and Chen 2010; Schylander and Martinuzzi 2007; Seiffert 2008; Starkey 2000; Tencati, Perrini, and Pogutz 2004; Tsai and Chou 2009; Williams et al. 2000; Zobel 2007; Zorpas 2010)
	<i>Indicator</i> (Kinderyte 2010; Tencati, Perrini, and Pogutz 2004)
	<i>Life Cycle Assessment</i> (Masoni et al. 2004; Miles, Munilla, and McClurg 1999; Perez-Sanchez, Barton, and Bower 2003; Seidel et al. 2008; Starkey 2000)
	<i>Networking</i> (Collins et al. 2007; Halila 2007; Hammann, Habisch, and Pechlaner 2009; Jämsä et al. 2011; Lawrence et al. 2006; Moore and Manning 2009; Murillo and Lozano 2009)
	<i>Policy</i> (Bradford and Fraser 2008; Dibrell, Craig, and Hansen 2011)
	<i>Public-Private Partnership</i> (Balcázar 2010; Fresner 1998; Martinuzzi, Huchler, and Obermayr 2000; Neamtu 2011; von Malmberg 2003)
	<i>Quality Management Systems</i> (Bürgi 2011; Castka et al. 2004; Danes, Loy, and Stafford 2008; Fresner and Engelhardt 2004; Graafland, van de Ven, and Stoffele 2003; Husband and Mandal 1999; Jenkins 2006; Kerr 2006; Tencati, Perrini, and Pogutz 2004; Tsai and Chou 2009)
	<i>Social Management Systems</i> (Fresner and Engelhardt 2004; Hahn and Scheermesser 2006; Harms-Ringdahl, Jansson, and Malmén 2000; Jenkins 2006; Tencati, Perrini, and Pogutz 2004; Tsai and Chou 2009)
	<i>Supply Chain Management</i> (Giliberti et al. 2009; Lee and Klassen 2008; Pedersen 2009)
	<i>Sustainability Balanced Scorecard</i> (Hansen, Sextl, and Reichwald 2010; Parisi and Maraghini 2010)
	<i>Sustainability Reporting</i> (Borga et al. 2009; Burke and Gaughran 2007; Fassin 2008; Goetz 2010; Kinderyte 2008; Starkey 2000)

CSR, corporate social responsibility; SME, small and medium-sized enterprise.

Tencati 2006; Tencati, Perrini, and Pogutz 2004). Nevertheless, several authors have found exceptions to the prevailing view (Burke and Gaughran 2007; Gerstenfeld and Roberts 2000; Kerr 2006; Lawrence et al. 2006; Starkey 2000; Zorpas 2010). Most case study firms were willing to adopt a particular tool. However, these cases are usually restricted to the application of a single tool, observed during a short period of time, and often aided by a support program (e.g., a publicly funded research project).

At this point, it is reasonable to state that most sustainability management tools are either found to be not applicable for SMEs or observed to have been implemented in extremely limited cases. This raises the question what reasons do the literature provide why such tools are not being implemented in SMEs, which is the third thematic area of analysis covered in the next section.

Barriers for SME Implementation

The most prominent reasons explaining why sustainability management tools are not implemented in SMEs can be broken down into two categories—internal shortcomings and external deficiencies. First, internal shortcomings of SMEs include the lack of awareness on sustainability issues, the absence of perceived benefits, the lack of knowledge and expertise, and the lack of human and financial resources. The second category deals with external deficiencies, including insufficient external drivers and incentives, the unsuitability of formal management tools in informal SME structures, and the complexity of internationally designed standards and instruments for locally focused SMEs. Furthermore, the heterogeneity in the SME sector may explain certain limitations why generally developed tools are not widely implemented.

Internal SME Shortcomings

The lack of awareness of sustainability issues is the first shortcoming frequently attributed to the reasons of limited implementation of tools by SMEs. Small business owner-managers are often unaware of their company's environmental and social impacts. In turn, they do not apply any strategies or tools to rectify unrealized problems (Revell and Blackburn 2007). Compared with larger corporations, SMEs often see themselves as exempt

from sustainability issues due to their perception of having minimal impacts on societies and the environment (Gerstenfeld and Roberts 2000; Lawrence et al. 2006). However, such attitudes are counterproductive to sustainable development when considering the collective environmental and social impacts of all SMEs (Collins et al. 2007; Hillary 2004; Revell, Stokes, and Chen 2010).

A second commonly discussed internal shortcoming is the *absence of perceived benefits* (Brammer, Hoejmoose, and Marchant 2012; Friedman and Miles 2002; Neamtu 2011). For example, Brammer, Hoejmoose, and Marchant (2012) demonstrate that the smallest companies perceive significantly fewer benefits of engagement with environmental issues compared with medium-sized enterprises. Small businesses often do not realize that many opportunities and programs are available to educate and support them on environmental and social issues (Bradford and Fraser 2008; Burke and Gaughran 2007; Gerrans and Hutchinson 2000; Seidel et al. 2008; Zorpas 2010).

The lack of knowledge and expertise on sustainability issues refers to SME owner-managers having an inexperienced view of their social and environmental impacts. Even if they become more aware of the impacts and possible benefits, they still lack the expertise to properly deal with these issues (Ammenberg and Hjelm 2003; Bradford and Fraser 2008; Gerstenfeld and Roberts 2000; Hillary 2000; Lee 2009; Revell and Blackburn 2007; Seidel et al. 2008). This lack of expertise can lead SMEs to adopt reactive strategies to emerging environmental and social issues although they do not embed these strategies into the core business over the long term (Schaper 2002).

Last but not least, the literature considers the *lack of human and financial resources* to be of high relevance toward the weak implementation of sustainability management tools. SMEs are not only faced with financial and time constraints to implement sustainability management tools, but they lack the human resources as well (Ammenberg and Hjelm 2003; Borga et al. 2009; Collins et al. 2007; Friedman and Miles 2002; Gerstenfeld and Roberts 2000; Graafland, van de Ven, and Stoffele 2003; Hillary 2000, 2004; Lee 2009; Tencati, Perrini, and Pogutz 2004). SME employees are usually responsible or at least involved in more than one business function, wearing many different hats within the firm. Burke and Gaughran

(2007) found that time constraints on employees were a major obstacle for implementation.

External Deficiencies

External deficiencies explain the rare implementation of sustainability management tools with insufficient external drivers and the lack of suitable standards and tools for SMEs.

Insufficient *external drivers and incentives*, both from governmental ministries and from the marketplace, are seen as major hindrances for SMEs to engage in sustainability management practices (Ammenberg and Hjelm 2003; Gerstenfeld and Roberts 2000; Hillary 2004; Lawrence et al. 2006; Revell and Blackburn 2007). Little regulatory pressure and low customer demand to adopt sustainability management lead SME managers to believe that the tools and systems to operationalize sustainability are of little relevance.

Several authors criticize *the unsuitability of formal management tools* as the main implementation problem because of the inappropriate fit between formal tools and standards, and informal, flexible SME structures and culture (Ammenberg and Hjelm 2003; Graafland, van de Ven, and Stoffele 2003; Hillary 2000; Perrini and Tencati 2006). Certain tools can be expensive and time consuming to implement and maintain within SMEs. For example, Ammenberg and Hjelm (2003, p. 173) argue, “for some of the smallest of firms, the standardized EMS approach seemed a bit too administratively burdensome, in spite of using a joint EMS.”

The complexity of sustainability management standards and tools is often mentioned as an obstacle for locally situated SMEs. Small enterprises mostly act on a local level, whereas most environmental, social, and sustainability standards and tools were developed to account for national and international issues, usually stemming from the impacts of business in large companies (Perrini and Tencati 2006; Revell and Blackburn 2007).

Heterogeneity of SMEs

In addition to these internal and external barriers, it is cumbersome to propose the universal application of sustainability management tools to such a diverse group of companies as SMEs are not a homogenous group (Hillary 2000; Seidel et al. 2008). Hillary (2000, p. 2) questions, “Why should an enterprise be defined by size at all?” She recommended that

studies should narrow down their foci on subcategories of SMEs (e.g., micro, small, or medium-sized enterprises, as categorized in European Commission 2005). With few exceptions (Russo and Tencati 2009; Zorpas 2010), the majority of the literature have not made such a differentiation of sustainability management tools according to these subcategories.

Thus, a mismatch exists between the generality of sustainability management tools proposed in research and the heterogeneity of SMEs in practice, which seems to require a diverse set of more size and sector-specific tools. The intention of the following section is to advance the literature by developing a set of criteria for the improved implementation of a wide range of sustainability management tools in SMEs based on the findings in the literature.

Facilitating Criteria of Tools for SME Implementation

So far, the majority of generally designed sustainability management tools in their current form are not being implemented by most SMEs (Graafland, van de Ven, and Stoffele 2003; Lee 2009; Moore and Spence 2006; Perrini and Tencati 2006; Tencati, Perrini, and Pogutz 2004). However, these tools cannot be easily disregarded from the scope of SMEs as they have been observed to operationalize sustainability strategies very effectively in larger enterprises (Graafland, van de Ven, and Stoffele 2003). Surveying the literature has provided a summary list of key criteria that tools must fulfill in order to improve a more widespread acceptance and application in SMEs:

- Simplicity/User-friendliness of tools
- Practicality/Cost-effectiveness of tools
- Adaptability/Flexibility of tools
- Company-tailored tools
- Locally focused tools
- Group and network-oriented tools

For SMEs, tools must be *simple and user-friendly* in the implementation and maintenance processes (Seidel et al. 2008; Starkey 2000; Zorpas 2010). A “user-friendly” tool should contain straightforward guidelines for application and maintenance (Friedman and Miles 2002; Gerstenfeld and Roberts 2000; Maijala and Pohjola 2006). For example, Burke and Gaughran (2006) and Zorpas (2010) emphasized that a streamlined approach to implementing an EMS in comparison with the

standard process is necessary for SMEs. Through the assistance of the EMAS EASY guidebook, SMEs can implement an EMS incrementally and minimize the required documentation through the support of Eco-Mapping (Burke and Gaughran 2006; Koroljova and Voronova 2007; Zorpas 2010).

Tools must be *practical and cost-effective*. More specifically, the implementation of a given tool must fit within the time, cost, and personnel constraints of SMEs (Friedman and Miles 2002; Seidel et al. 2008). For example, the “Better Business Pack (BBP)” supports SMEs in dealing with the major practical aspects of environmental measurement while providing managers with sense of “value for money” on their investment (Friedman and Miles 2002).

Tools must be *adaptable, flexible, and take into consideration the informal business characteristics* of SMEs, allowing for some tolerance of informal cultures and management structures (Graafland, van de Ven, and Stoffele 2003; Kerr 2006; Seidel et al. 2008; Zorpas 2010). Furthermore, several authors (Collins et al. 2007; Tencati, Perrini, and Pogutz 2004) emphasized that the larger the SME becomes, the more these tools can be systematically adapted to fit the formal management structure of the company. In addition to their adaptability, tools should be *company tailored* so that they address the circumstances of each individual enterprise (Burke and Gaughran 2007; Fresner and Engelhardt 2004; Hillary 2004; Starkey 2000; Zorpas 2010). It may be noted, however, that this requirement could apply to both small and large enterprises.

Due to the mostly strong influence on the local surroundings, SME-specific tools should particularly *consider the local circumstances*, such as local ecosystems, local communities, and stakeholders (Collins et al. 2007; Gerstenfeld and Roberts 2000; Graafland, van de Ven, and Stoffele 2003; Tencati, Perrini, and Pogutz 2004). Thus, they should encourage and support SMEs to use local sustainable resources, hire and promote employees from the region, and invest in the local community (Perrini 2006; Tencati, Perrini, and Pogutz 2004).

Group and network-oriented tools should encourage greater diffusion in SMEs by offering solutions to alleviate many of the barriers to implementation (Ammenberg and Hjelm 2003; Castka et al. 2004; Collins et al. 2007; Halila 2007; Jämsä et al. 2011; Jenkins 2006;

Kürzinger 2004; Lawrence et al. 2006; Murillo and Lozano 2009; Seiffert 2008). For example, EcoProfit has helped numerous SMEs improve their environmental performance through public-private partnerships between local municipalities and companies (Balcázar 2010; Fresner 2004; Martinuzzi, Huchler, and Obermayr 2000; Neamtu 2011).

So far, the literature has mainly focused on incremental developments and slight adaptations of the existing sustainability management tools. However, it is still to be empirically investigated whether meeting these aforementioned criteria leads to further implementation of the proposed tools or whether the simultaneous development of new and improved tools for SMEs is necessary. For example, Graafland, van de Ven, and Stoffele (2003) have questioned whether existing tools can be redesigned in a way to fit SMEs or if completely new methods are required.

Discussion and Outlook

Based on the thematic analysis in four particular areas of investigation, including the overview of proposed tools, the reasons for implementation, the barriers for implementation, and the key facilitating criteria to improve applicability of tools in SMEs, the discussion section aims to synthesize these aspects into one. Thereafter, an outlook is provided with regard to consequences for future research and SME management.

Tracing the development of the literature over the past two decades reveals several interesting findings. First, the range of tools proposed in the academic literature has become greater and more diversified over time. Second, most barriers for SME implementation have been addressed with a multitude of manageable solutions. Third, the facilitating criteria for SME implementation, which are mostly theoretical, have also been supported by empirical evidence.

The range of tools proposed in the academic literature has increased in quantity and variety over time. What started out at the beginning with a strong environmental management perspective (e.g., studies concentrating on the implementation of an EMS), has evolved into a more integrative management perspective. This approach has opened new doors to explore integrative management systems (IMS), covering quality, social, health and safety, and environmental management issues simultaneously

(Burke and Gaughran 2006; Bürgi 2011; Fresner and Engelhardt 2004; Jenkins 2006; Tsai and Chou 2009). In addition, SME-specific tools were mostly introduced in the academic literature in the latter part of the last decade (e.g., SERS, discussed in Perrini and Tencati 2006).

Second, most of the barriers for SME implementation, while still prevalent in the majority of the literature, have been specifically addressed with manageable solutions. Several authors have provided a direct link between barriers for implementation and the facilitating criteria that can amend these shortcomings (Borga et al. 2009; Friedman and Miles 2002; Gerstenfeld and Roberts 2000; Hillary 2004; Kinderyte 2010; Schylander and Martinuzzi 2007; Williams et al. 2000). Some authors recognize that tools alone are not enough, and SMEs must look beyond the facilitating criteria at other important aspects, such as employee training, motivation, and leadership (Burke and Gaughran 2007; Friedman and Miles 2002; Kerr 2006; Masurel 2007). In addition, participation and teamwork by an organization's employees are essential for successful implementation (Arnold 2010).

Third, the proposed facilitating criteria to improve applicability of tools in SMEs, which are mostly theoretical, have also been supported by some empirical evidence. For example, Heras and Arana (2010) confirmed that the criteria *simplicity and practicality* can have a positive effect on implementation rates. In their quantitative survey on a simplified EMS, called Ekoscan, the results show an increased adoption of Ekoscan in SMEs in comparison with ISO 14001. They argue that higher implementation rates are mainly due to less work for documentation and lower cost for implementation. In addition, studies covering the facilitating criteria *group and network-oriented tools* (Halila 2007; Seiffert 2008; Zobel 2007) have demonstrated the economic and long-term objective benefits of joint EMS and group certification. Cooperation between multiple SMEs simplifies the implementation process and reduces the cost of certification.

Despite these positive developments of tools and support programs over the past two decades, the literature remains clear that most tools are not being implemented by SMEs, and the majority of small businesses do not implement sustainability management tools at all. The facilitating criteria developed in the more

recent literature are intended to alleviate some barriers to SME implementation, especially dealing with lack of resources, lack of awareness and expertise, and so forth. However, it appears that most SMEs still fail to see the economic benefits of sustainability practices. Therefore, these firms have little to no incentive to implement tools to support practices regarded as mere costs (Brammer, Hoejmose, and Marchant 2012; Friedman and Miles 2002). In the absence of perceived economic benefits coupled with insufficient external drivers and support programs, a gap between awareness and implementation of tools in SMEs will persist (Brammer, Hoejmose, and Marchant 2012; Gadenne, Kennedy, and McKeiver 2009; Hahn and Scheermesser 2006; Jenkins 2006). In the following subsections, the consequences for further research and SME management are discussed.

Consequences for Further Research

Given the substantial implementation deficiencies with sustainability management tools, the question may be asked whether the sustainability management literature has been too idealistic (Dentchev 2009) and not sufficiently instrumental with regard to SMEs. One conclusion could be that future research should consider further theories in addition to those already observed. Another conclusion could be that a different focus on research may be required.

The prevailing theory applied more frequently in the covered literature is stakeholder theory. Stakeholder theory sheds some light on the reasons of implementing sustainability management tools, which usually stem from the relationships with internal and external stakeholders. Tools, such as public-private partnerships, reporting, and dialogue, can be very useful to improve the strength of these relationships, which refers back to stakeholder theory (Gadenne, Kennedy, and McKeiver 2009). Stakeholder theory could be relevant to explain an EMS, as it attempts to involve both internal (employees) and external stakeholder (suppliers, local authorities) in safe environmental practices of a firm (Danes, Loy, and Stafford 2008; Fresner and Engelhardt 2004; Friedman and Miles 2002; Kerr 2006; Seiffert 2008; Zobel 2007; Zorpas 2010).

In addition to stakeholder theory, other theories could provide further insight into SME characteristics. For example, social capital

theory refers to beneficial cooperation between various institutions, networks, and business partners, and between individuals (Perrini 2006; Russo and Tencati 2009; Spence, Schmidpeter, and Habisch 2003). Perrini (2006) suggests that specific tools are needed to maintain and enhance SMEs' social capital.

With few exceptions (e.g., Halila 2007), the diffusion of innovative tools has so far not been empirically researched in depth and could be further investigated with regard to their role of supporting corporate sustainability. In accordance with innovation diffusion theory (Rogers 2003), new insights could be gained from two perspectives. Either tools can be perceived as innovations, or tools can be observed to foster the diffusion of sustainability-related innovations. On one hand, tools themselves, such as an EMS, can be considered an "organizational environmental innovation" as it creates new or modifies existing processes, practices, products, and systems (Halila 2007, p. 170). On the other hand, tools can provide support in accelerating sustainability innovations (Maijala and Pohjola 2006). Furthermore, networks (Collins et al. 2007; Halila 2007) and public-private partnerships, such as EcoProfit (Balcázar 2010; Neamtu 2011), can serve as platforms to facilitate the diffusion of sustainability management tools in SMEs.

From an institutional theory perspective, other possible rationales could be investigated in depth, like whether mimicry or coercive behavior (DiMaggio and Powell 1983) or whether management fashions (Abrahamson 1991) play an important role and what consequences could be drawn for the promotion of sustainability management tools. Transaction cost theory (Graafland, van de Ven, and Stoffele 2003) reveals how opportunity costs and risks may influence SME managers' decision-making on implementation of tools. A sustainable family business theory was also mentioned in two studies (Danes, Loy, and Stafford 2008; Fitzgerald et al. 2010), which could provide greater insight into how adopted systems, such as quality management or an EMS, fit into the interface between family and business from generation to generation.

From a more functional standpoint, future research may have to explore new approaches with regard to sustainability management tools for SMEs. For example, the rationale and motivations of SME managers could be investigated with regard to the implementation of

sustainability management tools. In particular, the gap between awareness and application of sustainability management tools by SME managers could be further examined (e.g., "value-action gap" in Revell, Stokes, and Chen 2010). Such an investigation would provide a better insight on what tools may have further potential to close these value-action gaps, and how communication could be improved to increase awareness and enhance perceived economic benefits.

Although the SME-specific barriers have been discussed comprehensively in the literature, the relationships between barriers and actual implementation of tools have not yet been investigated. Future research could explore these barriers in greater depth to observe their influences on the implementation of sustainability management tools in SMEs. Regression models could illustrate the varying levels of influence that barriers have to explain the variance in implementation of tools. For example, an interesting outcome would be to identify if the lack of awareness and knowledge has a greater influence on implementation of tools than other barriers. If this were the case, recommendations could be made for awareness raising and training programs that are designed specifically for SME managers as a precursor to implementation.

Future research could benefit from stronger collaboration between SME and sustainability researchers. Researchers and journals with an SME focus could contribute to this field by investigating whether sustainability management tools create lasting benefits for small businesses. Further empirical research could investigate the role of external partnerships, programs, and platforms to overcome the absence of perceived benefits and enhance the diffusion of tools in SMEs. Such studies could find out whether local programs and partnerships go beyond creating short-term hype and awareness, and if they have the capacity to reach most of the SMEs in the community.

Consequences for SME Management

Sustainability management does not mean that a company adopts a one-size-fits-all approach (Gelbmann 2010; Gerstenfeld and Roberts 2000). Thus, SME owner-managers are challenged to choose and implement a set of tools that help them operationalize corporate sustainability relevant to their particular business and surroundings.

The need to develop SME-specific sustainability management tools that consider the heterogeneity among SMEs has been expressed (Hillary 2000). Such differentiation could, for instance, be made in terms of size between micro, small, or medium-sized enterprises, or in terms of industry sector. In fact, many authors encourage the development of further sector-specific tools and indicators (Bradford and Fraser 2008; Friedman and Miles 2002; Lee 2009; Maijala and Pohjola 2006). For example, Maijala and Pohjola (2006) demonstrate how a web-based EMS tool has helped companies in the transportation sector overcome barriers to implementation. They stress that the diffusion of EMS will be improved through the development of similar sector-specific tools.

SME managers may, however, be overtaxed to evaluate a large range of sustainability management tools proposed in the literature. In this context, the development of a sustainability strategy may be a necessary first step for two reasons. First, sustainability management tools may be more relevant to SMEs which have already established a sustainability strategy (Burke and Gaughran 2007; Fresner and Engelhardt 2004; Graafland, van de Ven, and Stoffele 2003; Parisi and Maraghini 2010; Perrini, Russo, and Tencati 2007; Tencati, Perrini, and Pogutz 2004), and second, such a strategy may provide criteria and guidelines to exactly which sustainability management tools may be adequate for the company. These strategies usually reveal the commitment of the SME's leaders to tackle sustainability issues, which can be incorporated into the core business of the firm. However, Russo and Tencati (2009) as well as Parisi and Maraghini (2010) advise that any sustainability-oriented strategies should reflect the level of informality and flexibility of the firm's size and structure.

Conclusions

Over the past two decades, the academic literature on sustainability management tools for SMEs has proposed a range of different approaches. This systematic literature review unveils that most of these tools are in their current, generalized form not being implemented by the majority of SMEs (Graafland, van de Ven, and Stoffele 2003; Lee 2009; Moore and Spence 2006; Perrini and Tencati 2006; Tencati, Perrini, and Pogutz 2004). Even though some tools have been developed specifically for

SMEs and other generally developed tools have been modified to improve application in SMEs, these developments have been few and far between. This review summarizes various barriers explaining these low implementation rates and provides key facilitating criteria, which have been proposed for the improved implementation of tools. Future studies could help determine whether meeting the proposed criteria is sufficient to lead to increased implementation, or if completely new approaches are required. Additionally, this field would certainly benefit if small business researchers joined with sustainability researchers on handling the challenges moving forward. Bringing their extensive knowledge and understanding of the peculiarities and complexities of small businesses, researchers with a strong SME focus could complement the existing literature on sustainability management tools.

References

- Abrahamson, E. (1991). "Managerial Fads and Fashions. The Diffusion and Rejection of Innovations," *Academy of Management Review* 16(3), 586–612.
- Ahire, S. L., and D. Y. Golhar (1996). "Quality Management in Large vs. Small Firms," *Journal of Small Business Management* 34(2), 1–13.
- Altham, W. (2007). "Benchmarking to Trigger Cleaner Production in Small Businesses: Drycleaning Case Study," *Journal of Cleaner Production* 15(9), 798–813.
- Ammenberg, J., and O. Hjelm (2003). "Tracing Business and Environmental Effects of Environmental Management Systems: A Study of Networking Small and Medium-sized Enterprises using a Joint Environmental Management System," *Business Strategy and the Environment* 12(3), 163–174.
- Arnold, M. (2010). "Stakeholder Dialogues for Sustaining Cultural Change," *International Studies of Management and Organization* 40(3), 61–77.
- Avram, D. O., and S. Kühne (2008). "Implementing Responsible Business Behavior from a Strategic Management Perspective: Developing a Framework for Austria SMEs," *Journal of Business Ethics* 82, 463–475.
- Balcázar, N. (2010). "Sustainability, Climate Protection and Economy: Three Areas Successfully Combined Through ECOPROFIT," *Reviews in Environmental Science and Biotechnology* 9(1), 29–33.

- Bansal, P. (2005). "Evolving Sustainability: A Longitudinal Study of Corporate Sustainable Development," *Strategic Management Journal* 26, 197–218.
- Biondi, V., M. Frey, and F. Iraldo (2000). "Environmental Management Systems and SMEs: Motivations, Opportunities and Barriers Related to EMAS and ISO 14001 Implementation," *Greener Management International* 29, 55–69.
- Borga, F., A. Citterio, G. Noci, and E. Pizzurno (2009). "Sustainability Report in Small Enterprises: Case Studies in Italian Furniture Companies," *Business Strategy and the Environment* 18(2), 162–176.
- Bradbury, H., and J. A. Clair (1999). "Promoting Sustainable Organizations with Sweden's Natural Step," *The Academy of Management Executive* 13(4), 63–74.
- Bradford, J., and E. D. G. Fraser (2008). "Local Authorities, Climate Change and Small and Medium Enterprises: Identifying Effective Policy Instruments to Reduce Energy Use and Carbon Emissions," *Corporate Social Responsibility and Environmental Management* 15(3), 156–172.
- Brammer, S., S. Hojmosse, and K. Marchant (2012). "Environmental Management in SMEs in the UK: Practices, Pressures and Perceived Benefits," *Business Strategy and the Environment* 21(7), 423–434.
- Bull, M. (2007). "Balance: The Development of a Social Enterprise Business Performance Analysis Tool," *Social Enterprise Journal* 3(1), 49–66.
- Burke, S., and W. F. Gaughran (2006). "Intelligent Environmental Management for SMEs in Manufacturing," *Robotics and Computer-Integrated Manufacturing* 22, 566–575.
- (2007). "Developing a Framework for Sustainability Management in Engineering SMEs," *Robotics and Computer-Integrated Manufacturing* 23, 696–703.
- Bürgi, J. (2011). "A Comprehensive Model for SMEs: Measuring the Dynamic Interplay of Morality, Environment and Management Systems—Towards Continuous Improvement," in *Ethics in Small and Medium-Sized Enterprise: The International Society of Business, Economics and Ethics Book*. Eds. L. J. Spence and M. Painter-Morland. London: Springer Publishing, 147–171.
- Carroll, A. B. (1999). "Corporate Social Responsibility: Evolution of a Definitional Construct," *Business and Society* 38, 268–295.
- Cassells, S., K. Lewis, and A. Findlater (2011). "SMEs and ISO 14001 Adoption: A New Zealand Perspective," *Small Enterprise Research* 18(1), 19–32.
- Castka, P., M. A. Balzarova, C. J. Bamer, and J. M. Sharp (2004). "How Can SMEs Effectively Implement the CSR Agenda? A UK Case Study Perspective," *Corporate Social Responsibility and Environmental Management* 11, 140–149.
- Chavan, M. (2005). "An Appraisal of Environmental Management Systems: A Competitive Advantage for Small Businesses," *Management of Environmental Quality* 16(5), 444–463.
- Ciliberti, F., G. de Groot, J. de Haan, and P. Pontrandolfo (2009). "Codes to Coordinate Supply Chains: SMEs' Experiences with SA8000," *Supply Chain Management: An International Journal* 14(2), 117–127.
- Cloquell-Ballester, V. A., R. Monterde-Diaz, V. A. Cloquell-Ballester, and A. C. Torres-Sibille (2008). "Environmental Education for Small and Medium-Sized Enterprises: Methodology and E-Learning in the Valencian Region," *Journal of Environmental Management* 87(3), 507–520.
- Collins, E., S. Lawrence, K. Pavlovich, and C. Ryan (2007). "Business Networks and the Uptake of Sustainability Practices: The Case of New Zealand," *Journal of Cleaner Production* 15, 729–740.
- Copeland, A., and S. Le Clue (1999). "EMS as a Mainstream Business Tool: Perspectives from Hong Kong," *Journal of Environmental Assessment Policy and Management* 1(2), 159–175.
- Coskeran, T., and P. S. Phillips (2005). "Economic Appraisal and Evaluation of UK Waste Minimisation Clubs: Proposals to Inform the Design of Sustainable Clubs," *Resources, Conservation and Recycling* 43(4), 361–374.
- Cote, R., A. Booth, and B. Louis (2006). "Eco-Efficiency and SMEs in Nova Scotia, Canada," *Journal of Cleaner Production* 14, 542–550.
- Danes, S., J. T. C. Loy, and K. Stafford (2008). "Business Planning Practices of Family-Owned Firms Within a Quality Framework," *Journal of Small Business Management* 46(3), 395–421.
- Davies, I. A., and A. Crane (2010). "Corporate Social Responsibility in Small- and Medium-Size Enterprises: Investigating Employee

- Engagement in Fair Trade Companies,” *Business Ethics: A European Review* 19(2), 126–139.
- Dentchev, N. (2009). “To What Extent Is Business & Society Literature Idealistic?” *Business and Society* 48(1), 10–38.
- Dibrell, C., J. Craig, and E. Hansen (2011). “Natural Environment, Market Orientation, and Firm Innovativeness: An Organizational Life Cycle Perspective,” *Journal of Small Business Management* 49(3), 467–489.
- DiMaggio, P., and W. Powell (1983). “The Iron Cage Revisited. Institutional Isomorphism and Collective Efficient in Organisational Fields,” *American Sociological Review* 48, 147–160.
- Dyllick, T., and K. Hockerts (2002). “Beyond the Business Case for Corporate Sustainability,” *Business Strategy and the Environment* 11, 130–141.
- Epstein, M. J. (2008). *Making Sustainability Work: Best Practices in Managing and Measuring Corporate Social, Environmental and Economic Impacts*. Sheffield: Greenleaf Publishing.
- European Commission (2005). “The New SME Definition. User Guide and Model Declaration.” http://ec.europa.eu/enterprise/policies/sme/files/sme_definition/sme_user_guide_en.pdf. Accessed November 6, 2010.
- Fassin, Y. (2008). “SMEs and the Fallacy of Formalising CSR,” *Business Ethics: A European Review* 17(4), 364–378.
- Fitzgerald, M. A., G. W. Haynes, H. L. Schrank, and S. M. Danes (2010). “Socially Responsible Process of Small Family Business Owners: Exploratory Evidence from the National Family Business Survey,” *Journal of Small Business Management* 48(4), 524–551.
- Foundation Center (2011). “Tools and Resources for Assessing Social Impact (TRASI).” <http://trasi.foundationcenter.org/>. Accessed July 10, 2012.
- Frederick, W. C. (1994). “From CSR1 to CSR2: The Maturing of Business-and-Society Thought,” *Business and Society* 33, 150–164.
- Fresner, J. (1998). “Options, Measures, Results: Eco-Profit-Styria-Prepare Two Years After Project End,” *Journal of Cleaner Production* 6, 237–245.
- (2004). “Small and Medium Sized Enterprises and Experiences with Environmental Management,” *Journal of Cleaner Production* 12, 545–547.
- Fresner, J., and G. Engelhardt (2004). “Experiences with Integrated Management Systems for two Small Companies in Austria,” *Journal of Cleaner Production* 12(6), 623–631.
- Friedman, A. L., and S. Miles (2002). “SMEs and the Environment: Evaluating Dissemination Routes and Handholding Levels,” *Business Strategy and the Environment* 11, 324–341.
- Gadenne, D. L., J. Kennedy, and C. McKeiver (2009). “An Empirical Study of Environmental Awareness and Practices in SMEs,” *Journal of Business Ethics* 84(1), 45–63.
- Gelbmann, U. (2010). “Establishing Strategic CSR in SMEs: An Austrian CSR Quality Seal to Substantiate the Strategic CSR Performance,” *Sustainable Development* 18, 90–98.
- Gerrans, P., and B. Hutchinson (2000). “Sustainable Development and Small and Medium-Sized Enterprises: A Long Way to Go,” in *Small and Medium-Sized Enterprises and the Environment*. Ed. R. Hillary. Sheffield: Greenleaf Publishing, 75–81.
- Gerstenfeld, A., and H. Roberts (2000). “Size Matters: Barriers and Prospects for Environmental Management in Small and Medium-Sized Enterprises,” in *Small and Medium-Sized Enterprises and the Environment*. Ed. R. Hillary. Sheffield: Greenleaf Publishing, 106–118.
- Gibson, M. (2001). “The Work of Envirowise in Driving Forward UK Industrial Waste Reduction,” *Resources, Conservation and Recycling* 32(3–4), 191–202.
- Gladwin, T., J. Kennelly, and T. Krause (1995). “Shifting Paradigms for Sustainable Development: Implications for Management Theory and Research,” *Academy of Management Review* 20(4), 874–907.
- Goetz, K. S. (2010). “Encouraging Sustainable Business Practices Using Incentives: A Practitioner’s View,” *Management Research Review* 33(11), 1042–1053.
- Göbbels, M. (2002). “Reframing Corporate Social Responsibility: The Contemporary Conception of a Fuzzy Notion.”
- Graafland, J., B. van de Ven, and N. Stoffele (2003). “Strategies and Instruments for Organising CSR by Small and Large Businesses in the Netherlands,” *Journal of Business Ethics* 47(1), 45–60.
- Gunningham, N., and D. Sinclair (2002). “Partnerships, Management Systems and the Search for Innovative Regulation in the

- Vehicle Body Shop Industry," *Business Strategy and the Environment* 11(4), 236–253.
- Günter, E., and S. Kaulich (2005). "The EPM-KOMPAS: An Instrument to Control the Environmental Performance in Small and Medium-Sized Enterprises (SMEs)," *Business Strategy and the Environment* 14, 361–371.
- Hahn, T., and M. Scheermesser (2006). "Approaches to Corporate Sustainability Among German Companies," *Corporate Social Responsibility and Environmental Management* 13(3), 150–165.
- Halila, F. (2007). "Networks as a Means of Supporting the Adoption of Organizational Innovations in SMEs: The Case of Environmental Management Systems (EMS) Based on ISO 14001," *Corporate Social Responsibility and Environmental Management* 14(3), 167–181.
- Hammann, E.-M., A. Habisch, and H. Pechlaner (2009). "Values That Create Value: Socially Responsible Business Practices in SMEs—Empirical Evidence from German Companies," *Business Ethics: A European Review* 18(1), 37–51.
- Hansen, E. G., M. Sextl, and R. Reichwald (2010). "Managing Strategic Alliances Through a Community-Enabled Balanced Scorecard: The Case of Merck Ltd., Thailand," *Business Strategy and the Environment* 19(6), 387–399.
- Harms-Ringdahl, L., T. Jansson, and Y. Malmén (2000). "Safety, Health and Environment in Small Process Plants: Results from a European Survey," *Journal of Safety Research* 31(2), 71–80.
- Heras, I., and G. Arana (2010). "Alternative Models for Environmental Management in SMEs: The Case of Ekoscan vs. ISO 14001," *Journal of Cleaner Production* 18, 726–735.
- Heupel, T., and N. Wendisch (2003). "Green Success: Process-Based Environmental Cost Accounting: Implementation in SMEs in Germany," in *Environmental Management Accounting. Purpose and Progress*. Eds. M. Bennett, P. M. Rikhardsson, and S. Schaltegger. Dordrecht: Kluwer Academic Publishers, 333–364.
- Hicks, C., and R. Dietmar (2007). "Improving Cleaner Production Through the Application of Environmental Management Tools in China," *Journal of Cleaner Production* 15, 305–408.
- Hillary, R. (2000). *Small and Medium-Sized Enterprises and the Environment*. Sheffield: Greenleaf Publishing.
- (2004). "Environmental Management Systems and the Smaller Enterprise," *Journal of Cleaner Production* 12, 561–569.
- Holmberg, J. (1998). "Backcasting: A Natural Step in Operationalising Sustainable Development," *Greener Management International* 23, 30–51.
- Husband, S., and P. Mandal (1999). "A Conceptual Model for Quality Integrated Management in Small and Medium Size Enterprises," *International Journal of Quality and Reliability Management* 16(7), 699–713.
- Hutchinson, A., and I. Chaston (1994). "Environmental Management in Devon and Cornwall's Small and Medium Sized Enterprise Sector," *Business Strategy and the Environment* 3(1), 15–22.
- Ilomäki, M., and M. Melanen (2001). "Waste Minimisation in Small and Medium-Sized Enterprises: Do Environmental Management Systems Help?," *Journal of Cleaner Production* 9, 209–217.
- Jämsä, P., J. Tähtinen, A. Ryan, and M. Pallari (2011). "Sustainable SMEs Network Utilization: The Case of Food Enterprises," *Journal of Small Business and Enterprise Development* 18(1), 141–156.
- Jenkins, H. (2006). "Small Business Champions for Corporate Social Responsibility," *Journal of Business Ethics* 67(3), 241–256.
- (2009). "A Business Opportunity Model of Corporate Social Responsibility for Small- and Medium-Sized Enterprises," *Business Ethics: A European Review* 18(1), 21–36.
- Jirillo, R., A. Rocchi, and O. Martucci (2003). "EMAS and Its Local Diffusion in Italy," *Corporate Social Responsibility and Environmental Management* 10, 40–49.
- Johannson, L. (1997). "The Challenge of Implementing ISO 14001 for Small- and Medium-Sized Enterprises—Surviving the New Global Jungle," *Environmental Quality Management* 7, 9–19.
- Karvonen, M. M. (2000). "Environmental Accounting as a Tool for SMEs in Environmentally Induced Economic Risk Analysis," *Eco-Management and Auditing* 7, 21–28.
- Kehbila, A. G., J. Ertel, and A. C. Brent (2009). "Strategic Corporate Environmental Management within the South African Automotive Industry: Motivations, Benefits, Hurdles,"

- Corporate Social Responsibility and Environmental Management* 16, 310–323.
- Kerr, I. R. (2006). “Leadership Strategies for Sustainable SME Operation,” *Business Strategy and the Environment* 15(1), 30–39.
- Kinderyte, L. (2008). “Analysis and Comparison of Methodologies for Corporate Sustainability Assessment,” *Environmental Research, Engineering and Management* 46(4), 66–75.
- (2010). “Methodology of Sustainability Indicators Determination for Enterprise Assessment,” *Environmental Research, Engineering and Management* 52(2), 25–31.
- Klein, S., and K. Vorbohle (2010). “Corporate Social Responsibility and Stakeholder Relations: The Perspectives of German Small and Medium-Sized Enterprises,” in *Ethics in Small and Medium-Sized Enterprise: The International Society of Business, Economics and Ethics Book*. Eds. L. J. Spence and M. Painter-Morland. London: Springer Publishing, 215–225.
- Koroljova, A., and V. Voronova (2007). “Eco-Mapping as a Basis for Environmental Management Systems Integration at Small and Medium Enterprise,” *Management of Environmental Quality* 18(5), 542–555.
- Kuhndt, M. (2004). “Sustainable Business Development,” in *Eco-Efficiency and Beyond*. Eds. J. D. Seiler-Hausmann, C. Liedtke, and E. U. von Weizsäcker. Sheffield: Greenleaf Publishing, 64–72.
- Kürzinger, E. (2004). “Capacity Building for Profitable Environmental Management,” *Journal of Cleaner Production* 12, 237–248.
- Lawrence, S. R., E. Collins, K. Pavlovich, and M. Arunachalam (2006). “Sustainability Practices of SMEs: The Case of New Zealand,” *Business Strategy and the Environment* 15(4), 242–257.
- Lee, K. H. (2009). “Why and How to Adopt Green Management into Business Organizations? The Case Study of Korean SMEs in the Manufacturing Industry,” *Management Decision* 47(7), 1101–1121.
- Lee, S.-Y., and R. D. Klassen (2008). “Drivers and Enablers That Foster Environmental Management Capabilities in Small- and Medium-Sized Suppliers in Supply Chains,” *Production and Operations Management* 17(6), 573–586.
- Lefebvre, E., L. A. Lefebvre, and S. Talbot (2003). “Determinants and Impacts of Environmental Performance in SMEs,” *R&D Management* 33(3), 263–283.
- Lehmann, M. (2006). “Government-Business Relationships through Partnerships for Sustainable Development: The Green Network in Denmark,” *Journal of Environmental Policy & Planning* 8(3), 235–257.
- Levner, N., L. Crutchfield, and D. Wells (2007). “Understanding the Impact of Social Entrepreneurs—Ashoka’s Answer to the Challenge of Measuring Effectiveness,” Ashoka Online. http://www.ashoka.org/files/ME_Impact06.pdf. Accessed November 18, 2010.
- Longo, M., M. Mura, and A. Bonoli (2005). “Corporate Social Responsibility and Corporate Performance: The Case of Italian SMEs,” *Corporate Governance: An International Review* 5(4), 28–42.
- McKeiver, C., and D. Gadenne (2005). “Environmental Management Systems in Small and Medium Business,” *International Small Business Journal* 23, 513–537.
- Maijala, A., and T. Pohjola (2006). “Web-Based Environmental Management Systems for SMEs: Enhancing the Diffusion of Environmental Management in the Transportation Sector,” in *Sustainability Accounting and Reporting*. Eds. S. Schaltegger, M. Bennett, and R. Burritt. London: Springer Publishing, 655–677.
- Makrinou, A., M. Mandaraka, and D. Assimakopoulos (2008). “Environmental Benchmarking for Management of Energy and Water Use: A Study of SMEs in the Mediterranean Region,” *Environmental Quality Management* 17(3), 31–44.
- Martinuzzi, A., E. Huchler, and B. Obermayr (2000). “Ecoprofit: Promoting Partnerships Between Small and Medium-Sized Enterprises and Local Authorities,” *Greener Management International* 30, 83–96.
- Masoni, P., B. Sara, E. Scimia, and A. Raggi (2004). “VerDEE: A Tool for Adoption of Life Cycle Assessment in Small and Medium Sized Enterprises in Italy,” *Progress in Industrial Ecology: an International Journal* 1(3), 203–228.
- Masurel, E. (2007). “Why SMEs Invest in Environmental Measures: Sustainability Evidence from Small and Medium-Sized Printing Firm,” *Business Strategy and the Environment* 16(3), 190–201.
- Matten, D., and A. Crane (2005). “Corporate Citizenship: Toward an Extended Theoretic-

- cal Conception," *Academy of Management Review* 30(1), 166–179.
- Miles, M. P., L. S. Munilla, and T. McClurg (1999). "The impact of ISO 14000 Environmental Management Standards on Small and Medium Sized Enterprises," *Journal of Quality Management* 4(1), 111–122.
- Moore, G., and L. Spence (2006). "Responsibility and Small Business," *Journal of Business Ethics* 67(3), 219–226.
- Moore, S. B., and S. L. Manring (2009). "Strategy Development in Small and Medium Sized Enterprises for Sustainability and Increased Value Creation," *Journal of Cleaner Production* 17(2), 276–282.
- Morsing, M., and F. Perrini (2009). "CSR in SMEs: Do SMEs Matter for the CSR Agenda?," *Business Ethics: A European Review* 18(1), 1–6.
- Moustaghfir, K. (2008). "The Dynamics of Knowledge Assets and Their Link with Firm Performance," *Measuring Business Excellence* 12(2), 10–24.
- Murillo, D., and C. Lozano (2009). "Pushing Forward SME CSR Through a Network: An Account from the Catalan Model," *Business Ethics: A European Review* 18(1), 7–20.
- Neamtu, B. (2011). "Public-Private Partnerships for Stimulating the Eco-Efficiency and Environmental Responsibility of SMEs," *Transylvanian Review of Administrative Sciences* 34, 137–154.
- Niehm, L. S., J. Swinney, and N. J. Miller (2008). "Community Social Responsibility and Its Consequences for Family Business Performance," *Journal of Small Business Management* 46(3), 331–350.
- Nielsen, A. E., and C. Thomsen (2009). "Investigating CSR Communication in SMEs: A Case Study Among Danish Middle Managers," *Business Ethics: A European Review* 18(1), 83–93.
- O'Laoire, D., and R. Welford (1995). "The Environmental Management System in Small and Medium-Sized Enterprises Using ISO 14000," *Eco-Management and Auditing* 2(1), 12–17.
- Parisi, C., and M. P. Maraghini (2010). "Operationalising Sustainability: How SMEs Translate Social and Environmental Issues into Practice," in *Business Performance Measurement and Management*. Ed. T. Paolo. Berlin: Springer Publishing, 131–148.
- Pedersen, E. R. (2009). "The Many and the Few: Rounding Up the SMEs That Manage CSR in the Supply Chain," *Supply Chain Management: An International Journal* 14(2), 109–116.
- Perez-Sanchez, D., J. R. Barton, and D. Bower (2003). "Implementing Environmental Management in SMEs," *Corporate Social Responsibility and Environmental Management* 10, 67–77.
- Perrini, F. (2006). "SMEs and CSR Theory: Evidence and Implications from an Italian Perspective," *Journal of Business Ethics* 67(3), 305–316.
- Perrini, F., and M. Minoja (2008). "Strategizing Corporate Social Responsibility: Evidence from an Italian Medium-Sized, Family-Owned Company," *Business Ethics: A European Review* 17(1), 47–63.
- Perrini, F., and A. Tencati (2006). "Sustainability and Stakeholder Management: The Need for New Corporate Performance Evaluation and Reporting Systems," *Business Strategy and the Environment* 15, 296–308.
- Perrini, F., A. Russo, and A. Tencati (2007). "CSR Strategies of SMEs and Large Firms: Evidence from Italy," *Journal of Business Ethics* 74(3), 285–300.
- Petts, J. (1998). "Environmental Responsiveness, Individuals and Organizational Learning: SME Experience," *Journal of Environmental Planning and Management* 41(6), 711–730.
- Revell, A., and R. Blackburn (2007). "The Business Case for Sustainability? An Examination of Small Firms in the UK's Construction and Restaurant Sectors," *Business Strategy and the Environment* 16(6), 404–420.
- Revell, A., D. Stokes, and H. Chen (2010). "Small Businesses and the Environment: Turning Over a New Leaf?," *Business Strategy and the Environment* 19, 273–288.
- Robert, K.-H. (2000). "Tools and Concepts for Sustainable Development, How Do They Relate to a General Framework for Sustainable Development, and to Each Other?," *Journal of Cleaner Production* 8, 243–254.
- Robert, K.-H., B. Schmidt-Bleek, J. Aloisi de Lardeerel, G. Basile, J. L. Jansen, R. Kuehr, P. Price Thomas, M. Suzuki, P. Hawken, and W. Wackernagel (2002). "Strategic Sustainable Development—Selection, Design and Synergies of Applied Tools," *Journal of Cleaner Production* 10, 197–214.
- Roberts, S., R. Lawson, and J. Nicholls (2006). "Generating Regional-Scale Improvements in

- SME Corporate Responsibility Performance: Lessons from Responsibility Northwest," *Journal of Business Ethics* 67, 275–286.
- Rogers, E. M. (2003). *Diffusion of Innovations*, 5th ed. New York: The Free Press.
- Rondinelli, D. A., and M. A. Berry (2000). "Environmental Citizenship in Multinational Corporations: Social Responsibility and Sustainable Development," *European Management Journal* 18(1), 70–84.
- Russo, A., and A. Tencati (2009). "Formal vs. Informal CSR Strategies: Evidence from Italian Micro, Small, Medium-Sized, and Large Firms," *Journal of Business Ethics* 85, 339–353.
- Ryan, A., L. O'Malley, and M. O'Dwyer (2010). "Responsible Business Practice: Re-Framing CSR for Effective SME Engagement," *European Journal of International Management* 4(3), 290–302.
- Schaltegger, S., and R. Burritt (2005). "Corporate Sustainability," in *The International Yearbook of Environmental and Resource Economics 2005/2006: A Survey of Current Issues*. Eds. H. Folmer and T. Tietenberg. Cheltenham: Edward Elgar, 185–222.
- Schaltegger, S., and M. Wagner (2011). "Sustainable Entrepreneurship and Sustainability Innovation: Categories and Interactions," *Business Strategy and the Environment* 20(4), 222–237.
- Schaltegger, S., C. Herzig, O. Kleiber, and J. Müller (2002). *Sustainability Management in Business Enterprises. Concepts and Instruments for Sustainable Organisation Development*. Bonn/Lüneburg: German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety and Centre for Sustainability Management.
- Schaper, M. (2002). "The Challenge of Environmental Responsibility and Sustainable Development: Implications for SME and Entrepreneurship Academics," in *Radical Changes in the World. Will SMEs Soar or Crash?* Eds. U. Füglistaller, H. J. Pleitner, T. Volery, and W. Weber. St. Gallen: Recontres de St. Gallen, 525–534.
- Schylander, E., and A. Martinuzzi (2007). "ISO 14001—Experiences, Effects and Future Challenges: A National Study in Austria," *Business Strategy and the Environment* 16, 133–147.
- Seelos, C., and J. Mair (2005). "Social Entrepreneurship: Creating New Business Models to Serve the Poor," *Business Horizons* 48(3), 241–246.
- Seidel, M., R. Seidel, D. Tedford, R. Cross, L. Wait, and E. Hämmerle (2008). "Overcoming Barriers to Implementing Environmentally Benign Manufacturing Practices: Strategic Tools for SMEs," *Environmental Quality Management* 18(3), 37–55.
- Seiffert, M. E. B. (2008). "Environmental Impact Evaluation using a Cooperative Model for Implementing EMS (ISO 14001) in Small and Medium-Sized Enterprises," *Journal of Cleaner Production* 16, 1447–1461.
- Shrivastava, P., and S. Hart (1995). "Creating Sustainable Corporations," *Business Strategy and the Environment* 4, 154–165.
- Spence, L. J., and J. F. Lozano (2000). "Communicating about Ethics with Small Firms. Experiences from the U.K. and Spain," *Journal of Business Ethics* 27(2), 43–53.
- Spence, L. J., R. Schmidpeter, and A. Habisch (2003). "Assessing Social Capital: Small and Medium Sized Enterprises in Germany and the U.K.," *Journal of Business Ethics* 47, 17–29.
- Starkey, R. (2000). "Environmental Management Tools: Some Options for Small and Medium-Sized Enterprises," in *Small and Medium-Sized Enterprises and the Environment*. Ed. R. Hillary. Sheffield: Greenleaf Publishing, 96–105.
- Sweeney, L. (2007). "Corporate Social Responsibility in Ireland: Barriers and Opportunities Experienced by SMEs When Undertaking CSR," *Corporate Governance: An International Review* 7(4), 516–523.
- Tencati, A., F. Perrini, and S. Pogutz (2004). "New Tools to Foster Corporate Socially Responsible Behavior," *Journal of Business Ethics* 53, 173–190.
- Thompson, J. K., and H. L. Smith (1991). "Social Responsibility and Small Business: Suggestions for Research," *Journal of Small Business Management* 29(1), 30–44.
- Tranfield, D., D. Denyer, and P. Smart (2003). "Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of a Systematic Review," *British Journal of Management* 14, 207–222.
- Tsai, W. H., and W. C. Chou (2009). "Selecting Management Systems for Sustainable Development in SMEs: A Novel Hybrid Model Based on DEMATEL, ANP and ZOGP," *Expert Systems with Application* 48(10), 1514–1528.

- Tseng, Y. F., Y. C. J. Wu, W. H. Wu, and C. Y. Chen (2010). "Exploring Corporate Social Responsibility Education: The Small and Medium-Sized Enterprise Viewpoint," *Management Decision* 48(10), 1514–1528.
- United Nations World Commission on Environment and Development (1987). *Our Common Future. The Brundtland Report*. Oxford: Oxford University Press.
- van Marrewijk, M. (2003). "A Value Based Approach to Organization Types: Towards a Coherent Set of Stakeholder-Oriented Management Tools," *Journal of Business Ethics* 55(2), 147–158.
- von Malmborg, F. (2003). "Conditions for Regional Public-Private Partnerships for Sustainable Development: Swedish Perspectives," *European Environment* 13, 133–149.
- von Weltzien Høivik, H., and D. Shankar (2011). "How Can SMEs in a Cluster Respond to Global Demands for Corporate Responsibility?," *Journal of Business Ethics* 101, 175–195.
- Wartick, S. L., and P. L. Cochran (1985). "The Evolution of the Corporate Social Performance Model," *Academy of Management Review* 10(4), 758–769.
- Weitz, K. A., and A. Sharma (1998). "Practical Life Cycle Assessment Through Streamlining," *Environmental Quality Management* 7, 81–87.
- Wendisch, N., and T. Heupel (2005). "Implementing Environmental Cost Accounting in Small and Medium-Sized Companies," in *Implementing Environmental Management Accounting: Status and Challenges*. Eds. P. Rikhardsson, M. Bennett, J. Bouma, and S. Schaltegger. Dordrecht: Springer Publishing, 193–205.
- Williams, H., A. van Hooydonk, P. Dingle, and D. Annandale (2000). "Developing Tailored Environmental Management Systems for Small Businesses," *Eco-Management and Auditing* 7, 106–113.
- Williamson, D., and G. Lynch-Wood (2001). "A New Paradigm for SME Environmental Practice," *The TQM Magazine* 13(6), 424–433.
- Williamson, D., G. Lynch-Wood, and J. Ramsay (2006). "Drivers of Environmental Behaviour in Manufacturing SMEs and the Implications for CSR," *Journal of Business Ethics* 67, 317–330.
- Wood, D. J. (1991). "Corporate Social Performance Revisited," *Academy of Management Review* 15(4), 691–718.
- Yoshikawa, T., and A. A. Rasheed (2009). "Convergence of Corporate Governance: Critical Review and Future Directions," *Corporate Governance: An International Review* 17(3), 388–404.
- Zobel, T. (2007). "The 'Pros' and 'Cons' of Joint EMS and Group Certification: A Swedish Case Study," *Corporate Social Responsibility and Environmental Management* 14, 152–166.
- Zorpas, A. (2010). "Environmental Management Systems as Sustainable Tools in the Way of Life for SMEs and VSMEs," *Bioresource Technology* 101, 1544–1557.

How Firm Strategies Impact Size of Partner-Based Retail Networks: Evidence From Franchising

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How do firms' partnering strategies impact the size of their partner-based retail networks? We draw on agency theory to address this question in the context of franchising. Our econometric analyses (based on 9 years of longitudinal balanced panel data) include assessment of data nonstationarity and estimation of a dynamic panel data model that accounts for unobserved heterogeneity and endogeneity. Our findings indicate that franchisee network size is driven more by franchisor strategies that mitigate agency costs than by strategies that simply lower entry and ongoing costs and barriers for franchisees.

Introduction and Literature Review

Although there are many different types of partner-based retail systems (including licensing and multilevel marketing), franchising is the most popular manifestation of this format. Since its infancy in the early 20th century, franchising has had a substantial impact on retailing landscapes across the world and enabled small firms to expand their businesses. According to Michael (1996), by the mid-1990s, franchise systems accounted for 30–40% of sales in the United States for a diverse range of indus-

tries. Recent estimates (Dant, Grünhagen, and Windsperger 2011) indicate that there are over 3,000 franchise systems in the United States, accounting for 901,093 franchisees, employing approximately 18 million people and generating an economic output of \$2.1 trillion (equal to about 40.9% of the U.S. retailing sector). Additionally, franchising is a key international expansion format for U.S. firms (Michael 2003).

Though there are many different types of franchise systems, business format franchise systems¹ account for the largest number of establishments, jobs, payroll, and output in the

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¹Business format franchise systems (for example, McDonald's, Pizza Hut, KFC, Dunkin' Donuts, Applebee's, H & R Block, Century 21 and ServiceMaster) are franchise systems where the contractual arrangement "includes not only the product, service, and trademark but also the entire business format itself—a marketing strategy and plan, operating manuals and standards, quality control, and continuing two way communication" (U.S. Department of Commerce 1987, pp. 3). In return for the right to use the franchisor's business format,

United States (Price Waterhouse Coopers 2008). The emergence of business format franchising as an important retail format has made it an attractive domain for the study of factors driving the size of partner-based retail networks. The performance and profitability of these networks is contingent on attracting effective partners to expand the market footprint of the retail system. Thus, an understanding of the factors and decisions that impact partner network size is of value to not only business format franchisors but also other firms with partner-based retail networks.

In this article, we build on extant literature and enhance understanding of what drives the size of franchisee networks through agency theory-based reasoning and rigorous econometric analyses that capture the effects of a rich set of franchisor partnering strategies. The importance of this endeavor is underscored by substantial variation observed across franchise systems in the size and growth of franchisee networks and total networks² (Blair and Lafontaine 2005; Perrigot 2004; Stanworth 1996) as well as calls for scholarly explanations of differing performance levels across franchise systems (e.g., Gillis and Castrogiovanni 2012).

We focus on the size of the business format franchisor's franchisee network for two primary reasons. One, we observe considerable heterogeneity in the sizes of franchisee networks across franchisors and want to understand why some franchisors have much larger franchisee networks than others. Specifically, we examine how differences in franchisor strategies that affect franchisees explain variations in the size of their franchisee networks. Given the positive externalities as well as economies of scale generated by a large franchisee network, this is a question of considerable managerial importance and relevance to firms. Second, we view franchisee network size as a key measure of franchisor performance, particularly for assessing a franchisor's partnering strategies. We observe four traditional approaches to perfor-

mance measurement in the extant franchising literature: attitudinal and perceptual measures; archival, internal, sales data-based measures; archival, publicly available financial data-based measures; and survival and failure rates. Though these approaches yield important insights about franchisor performance, each approach has some limitations (which are summarized in Table 1). Gillis and Castrogiovanni (2012) called for performance measures (other than survivability) that apply across industries and can be obtained for both private and publicly held franchisors.

A fifth approach, the one we adopt in this paper, measures franchising performance in terms of the number of retail outlets in the franchise system. This approach recognizes the strong positive relationship between network size and system sales and between system sales and firm value (Kling, Ghobadian, and O'Regan 2009), includes both privately and publicly held franchisors, uses archival data, can be obtained for franchisors across various industries and emulates the dominant tradition for measuring performance in the franchising literature. Dant, Paswan, and Kaufmann (1996) reported that a majority of studies of performance in franchise systems use measures based on the number of outlets in the system. However, many of these studies (e.g., Castrogiovanni and Justis 2002; Dant et al. 2007; Kosová and Lafontaine 2010;³ Sen 1998; Shane 1996; Shane, Shankar, and Aravindakshan 2006) focus on the overall system (including franchisor-owned outlets). This approach is appropriate when the goal is to evaluate overall franchisor performance. However, many franchisor strategies are designed to specifically impact franchisees and drive the size of the franchisee network rather than the total network. Hence, it is more appropriate to consider franchisee network size than total network size when assessing performance implications of these franchisor strategies. Overall system size is more likely to be affected

a franchisee typically pays an initial upfront franchisee fee as well as ongoing royalty and advertising fees (Dant and Berger 1996).

²For expositional clarity, we use the term "franchisee network" to refer to the network of franchisees in the chain and the term "total network" to refer to the totality of franchised and franchisor-owned outlets in the chain.

³Kosová and Lafontaine (2010) also measured performance of just the franchised component of franchised systems. However, they measured this performance in terms of exit from franchising and the growth rate of the franchisee network rather than franchisee network size. Instead, they use network size as an explanatory variable.

Table 1
Some Measures of Performance in the Franchising Literature

Performance Measure—Type	Some Examples	Strengths and Weaknesses
Survey-based attitudinal and perceptual data	Perceived performance (Kidwell, Nygaard, and Silkoset 2007), Consumer rated quality (Michael 2000)	These measures are important in that they allow for the measurement of aspects of performance that cannot be captured using other approaches. However, there are situations where methodological concerns arise regarding the use of self-reported attitudinal and perceptual measures (compared with measures derived from archival data).
Based on archival, internal data	Revenues per room (Kalnins 2004).	These measures often have the advantage of being fine-grained, cover operational as well as financial domains, and allow for a precise assessment of performance. However, they are industry-specific and do not facilitate comparisons across industries or multiple industry studies.
Based on archival, publicly available financial data	Return on assets and market-to-book value (Combs and Ketchen Jr. 1999a); intangible value (Srinivasan 2006); Sharpe ratio, Treynor ratio, Sortino ratio, upside potential ratio, and the Jensen index (Madanoglu, Lee, and Castrogiovanni 2011).	These measures enable the comparative assessment of financial and stock market performance across multiple industries. However, in the United States, the sample is limited to large, publicly listed franchisors that are very different from the smaller, privately held franchisors that constitute the majority of the franchising universe.
Survival and failure rates	Azoulay and Shane 2001; Kosová and Lafontaine 2010; Lafontaine and Shaw 1998; Michael and Combs 2008; Shane 1996, 1998.	Though this approach addresses the important question of why some franchisors fail and others survive, Gillis and Castrogiovanni (2012) noted that it does not explain variations in network size, growth, and performance across surviving franchisors. This gap is important because (1) in the United States, Blair and Lafontaine (2005, p. 48) found that, in 2001, approximately 45% of franchisors operated systems with less than 50 units, and approximately 89% of franchisors operated systems with 500 or fewer units; (2) internationally, Stanworth (1996) and Perrigot (2004) found that less than 50 percent of franchisors that survived failure continued to grow at healthy rates in the United Kingdom and France, respectively.

by factors other than a franchisor's franchisee-focused strategies. Therefore, given our substantive aims, we chose to focus on the number of franchised outlets in a franchise system as our measure of franchisor performance.

The importance of understanding how strategic decisions made by a franchisor influence the size of its franchisee network is reinforced by divergent perspectives on drivers of network size. Conventional wisdom among practitioners has often emphasized financial cost-based ideas that a franchisor can develop a large franchisee network by lowering entry and ongoing costs for prospective franchisees (e.g., Chun 2008; Fell 2011). This viewpoint is echoed in Shane, Shankar, and Aravindakshan's (2006) study of drivers of total network size for young franchisors. In contrast, agency theory submits that franchisee network size may be influenced by the extent to which franchisor strategies reduce agency problems (moral hazard and adverse selection). Such actions create value for extant and prospective franchisees (Grünhagen and Dorsch 2003; Kaufmann and Stanworth 1995).

There are a relatively small number of studies that investigate drivers of growth and number of outlets for the total system and one study that examines franchisee network growth. Sen (1998) and Castrogiovanni and Justis (2002) study correlates of overall network growth. Dant et al. (2007) assessed correlates of total network size as well as the breadth and depth of distribution. Shane and his colleagues examined factors driving the size and growth of total networks for new franchisors—Shane (1996) studied the association between the use of franchising and total network growth, while Shane, Shankar, and Aravindakshan (2006) considered the effects of some additional pricing policy and strategic control decisions on total system size. Kosova and Lafontaine (2010) examined how chain age and size influence survival and growth rates for the total network as well as for the franchisee network. None of these studies concentrate on drivers of franchisee network size.

In this article, we make substantive contributions to the extant literature in two ways. First, we focus specifically on understanding what influences the number of franchised

outlets in a franchise system. This is in contrast to the emphasis on total network size in Shane, Shankar, and Aravindakshan (2006) and Dant et al. (2007). In our view, since the franchisor strategies examined in these studies relate to franchising and franchisees, franchisee network size is a more appropriate dependent variable than total network size. Second, we enhance the comprehensiveness of our study by considering a broad set of franchisors and range of franchisor decision variables. We consider franchisors of all sizes and ages in our sample. This is in contrast to Shane (1996) and Shane, Shankar, and Aravindakshan (2006) who focused on new franchisors only. We include franchisors from multiple industries, in keeping with the call from Gillis and Castrogiovanni (2012) to consider industries other than the restaurant industry. Though Kosova and Lafontaine (2010) covered franchisors across industries and ages, they use an unbalanced panel data set. We use a balanced panel data set that includes 9 years of longitudinal data from multiple industries.⁴ By using a balanced rather than an unbalanced panel, we can undertake econometric analyses that would otherwise not be feasible and which add rigor to our insights. Additionally, we cover a larger set of franchisor decision variables than Shane, Shankar, and Aravindakshan (2006) and Kosova and Lafontaine (2010), and this enhances the prescriptive value of our work.

We adopt an econometric modeling approach that checks for nonstationarity in the data and uses dynamic panel generalized method of moments (GMM) estimation that accounts for unobserved heterogeneity and endogeneity. We use the Arellano and Bover (1995) continuously updated estimator with white period robust standard errors (SEs) that are robust to innovations that have time series correlation structure that varies by cross-section. In the Arellano–Bover method, the GMM weight matrix and coefficients are updated (that is, re-estimated iteratively) until convergence. This approach often yields estimates that have better finite sample properties than approaches such as the Arellano and Bond (1991) two step method (where the GMM weight matrix is updated once and the final

⁴A balanced panel includes data for every year for each firm in the panel. In contrast, in an unbalanced panel, observations may be missing for one or more years for one or more firms in the panel.

coefficients are then estimated) and the two stage least squares fixed effects approach.

Our empirical analyses reveal statistically significant support for seven of our eight hypotheses—a higher royalty rate, higher advertising fee, smaller percentage of owned outlets, greater complexity, longer concept development time, greater use of qualification procedures, and more structural flexibility are associated with larger franchisee network size. Note that many variables that had been previously ignored in explanations of system size (e.g., complexity, concept development time, qualification, and structural flexibility) are found to have a statistically significant effect on franchisee network size. Our empirical findings counter the conventional wisdom among practitioners that key drivers of a franchisor's franchisee network size are strategies that simply lower entry and ongoing costs and barriers for franchisees. Instead, it is the agency cost reducing properties of a franchisor's partnering strategies that primarily drive franchisee network size. We contribute to agency theory research in franchising by explaining how the same set of franchisor strategies has implications for both the adverse selection (concerning prospective franchisees) and moral hazard (revolving around extant franchisees) problems in the system and describing how franchisor strategies designed to directly impact one problem may also indirectly affect the other.

In the next section, we present our overall theoretical approach. This is followed by our hypotheses and the specific theoretical rationales underlying them. We then describe our data and operationalizations. The subsequent section contains details of our estimation procedure and empirical results. We conclude with a discussion of the theoretical and managerial implications of our results, limitations, and possible directions for future research on this topic.

Theory

There are multiple perspectives that can be used to understand factors that influence franchisee network size. Conventional wisdom among practitioners is often grounded in the idea that franchisee network size is driven by lowering entry and ongoing financial costs and barriers for prospective franchisees (e.g., Chun 2008; Fell 2011). We adopt a different view, where the size of the franchisee network

depends on the competitiveness and profitability of the business format for the franchisor as well as for existing and prospective franchisees. This, in turn, is based on franchisor partnering strategies that mitigate agency costs associated with prospective and extant franchisee relationships and help the franchisor safeguard and enhance the business format. Our view is primarily informed by insights from agency theory, a prominent theoretical perspective that has been widely used to study franchising issues as indicated in multiple meta-analyses (Combs and Ketchen Jr. 2003; Dant, Paswan, and Kaufmann 1996) and literature reviews (Blair and Lafontaine 2005; Combs, Michael, and Castrogiovanni 2004; Combs et al. 2011; Lafontaine and Slade 1997).

Agency theory focuses on the principal-agent exchange relationship, where one party (agent) acts on behalf of another party (principal). It is concerned with addressing agency problems and costs that arise when information asymmetries exist between the agent and the principal, and they have different interests (Arrow 1985; Bergen, Dutta, and Walker 1992; Eisenhardt 1989). Agency theory has been widely used to explain why firms choose to franchise instead of being vertically integrated (Blair and Lafontaine 2005). However, there are potential agency costs in a franchisor's relationships with extant and prospective franchisees as well. These agency costs can lead to underinvestment in advertising (Michael 2002) as well as lower overall system quality (Michael 2000). A franchisor's actions to mitigate the agency problems in its franchise system can safeguard and grow future rent streams for the system. By ensuring the entry of high-quality franchisees into the system and minimizing free riding by extant organizations within the system, a franchisor can improve the competitive standing of its business format. Lower agency costs reduce the likelihood of business failure for individual franchisees (Michael and Combs 2008) and facilitate expansion of the franchisee network. Thus, we posit that franchisors are able to expand their franchisee networks through strategies that alleviate potential agency costs associated with these networks.

Bergen, Dutta, and Walker (1992) noted that agency problems can be broken down into two types: precontractual (adverse selection or hidden information problems) and postcontractual (moral hazard or hidden

action problems⁵). *Adverse selection problems* arise from precontractual information asymmetries between principals and agents and heterogeneity in the quality of the economic actors (Spence 1973)—the principal is not as well informed as a prospective agent about whether the latter has the qualities needed to successfully perform an agent's tasks. A franchisor's primary agency concerns regarding adverse selection revolve around prospective franchisees.

A franchisor can overcome the adverse selection problem and facilitate economic exchange (Bergen, Dutta, and Walker 1992). First, it can *screen* prospective franchisees. This is particularly effective when the franchisor can easily obtain information about characteristics of applicants that are good predictors of their future performance as franchisees. Dnes (1992) considered the franchise contract as a screening device. If costs of screening prospective franchisees are too high, a franchisor can consider creating *signaling or self-selection* opportunities for high-quality prospective franchisees.

Note that precontractual information asymmetries and adverse selection problems can be bidirectional. Thus, a prospective franchisee may not be as well-informed as the franchisor about future prospects for the business format or whether the franchisor can effectively execute its responsibilities to the prospective franchisee once the latter joins the system. Consequently, a franchisor may undertake actions that serve as credible signals of its own quality to prospective franchisees so as to attract high-quality applicants.⁶ Within the franchising context, Gallini and Lutz (1992) used theoretical modeling to examine such *franchisor signaling* through the level of dual distribution and the fee structure of the franchise contract. Franchisor signaling is empirically investigated by Lafontaine (1993), Michael (2009), Scott

(1995) and Shane, Shankar, and Aravindakshan (2006).

Moral hazard problems arise in the postcontractual stage, where an agent may not act in the principal's best interests and, instead, engage in shirking or free riding on the efforts of the principal or other agents (Arrow 1985). The potential for moral hazard by the agent arises from a combination of three assumptions (Bergen, Dutta, and Walker 1992)—first, the agent is motivated by its self-interest and its goals and risk preferences can differ from those of the principal; second, information asymmetries exist regarding the agent's actions and the principal operates under incomplete information; and third, realized outcomes are also impacted by environmental factors.

Considerable attention is focused on the development of mechanisms that can prevent or reduce moral hazard by the agent (Bergen, Dutta, and Walker 1992). These mechanisms typically involve the creation of *incentives* to motivate the agent to pursue goals and outcomes consistent with the principal's interests (outcome-based control, as per Eisenhardt 1989) or the use of *monitoring* to collect more information about the agent's actions (behavior-based control, as per Eisenhardt 1989). A franchisor's moral hazard concerns largely revolve around extant franchisees.

It is helpful to recognize that extant franchisees are not the only source of moral hazard in franchising. A franchisor undertakes advertising, brand building, product/service mix improvement, outlet quality monitoring, and other activities on behalf of franchisees (Kaufmann and Stanworth 1995) and is, therefore, also a potential source of moral hazard. This view of two sided moral hazard (and the need to provide incentives to the franchisor) has found empirical support in the work of

⁵For expositional simplicity and consistency with the extant franchising literature, we hereafter refer to precontractual/hidden information agency problems as adverse selection problems and postcontractual/hidden action agency problems as moral hazard problems.

⁶An important distinction between quality signaling in the broader agency theory literature and franchisor quality signaling revolves around what constitutes "quality." In a general agency setting, quality often refers to fixed traits of the signaling entity that will impact the outcomes from the exchange relationship. In franchising, as suggested by Lafontaine (1993), franchisor quality is better viewed in terms of the future behavior of the franchisor. It is this future behavior, rather than exogenous franchisor characteristics, that will impact franchisee outcomes over the duration of a long term franchise contract. Therefore, franchisor signaling is more meaningful when it provides an indication of the future behavior of the franchisor.

Lafontaine (1992) and Brickley (2002). This perspective is also reflected in conceptual explanations for franchising (Rubin 1978), game-theoretic models of franchising (Bhattacharyya and Lafontaine 1995; Lal 1990; Mathewson and Winter 1985), and empirical reviews (Combs, Michael, and Castrogiovanni 2004; Lafontaine and Slade 1997). We adopt this two-sided moral hazard perspective in the development of our hypotheses. Franchisor moral hazard is reduced when contractual fees give the franchisor an incentive to not shirk or free ride on the effort of franchisees. Franchisee moral hazard can be curbed by incentives for franchisees and the monitoring of franchisees. Additional extant research that focuses on antecedents and consequences of moral hazard in franchising (and the use of incentives or monitoring mechanisms to mitigate it) includes Brickley (1999), Brickley and Dark (1987), Combs and Ketchen Jr. (1999a, 1999b), Gillis et al. (2011), Gonzalez-Diaz and Solis-Rodriguez (2012), Kidwell, Nygaard, and Silkoset (2007), Michael (2000, 2002), Shane (1996, 1998), and Wu (1999).

Agency theory provides us with a theoretical framework that can jointly consider a franchisor's concerns regarding extant and prospective franchisees. Since we are examining multiple dyads (franchisor-extant franchisee; franchisor-prospective franchisee), we recognize that franchisor strategies designed to directly impact agency costs in one dyad may also indirectly affect agency costs in another dyad. A franchisor that rigorously screens prospective franchisees and signals its commitment to provide superior ongoing services to those who join the system is more likely to overcome the adverse selection problem and attract high-quality potential franchisees. These high-quality applicants are likely to succeed as franchisees once they join the franchise system and facilitate the expansion of the franchisee network (by increasing its attractiveness to other high-quality prospective franchisees in the future). Franchisor strategies aimed at ensuring the entry of high-quality franchisees into the system can also indirectly alleviate the moral hazard problem by allaying extant franchisee concerns about moral hazard by new members of the franchisee network. When a franchisor invests considerable effort in ensuring the entry

of high-quality franchisees into the system, extant franchisees may perceive the franchisor to be less likely to free ride or shirk in the performance of its other functions. These two factors should motivate extant franchisees to eschew moral hazard and, instead, act in a manner that improves outcomes for the system and its members. This, in turn, reinforces the competitive standing of the franchise system and enables the subsequent expansion of the franchisee network.

A franchisor's strategies for structuring and managing exchange relationships with existing franchisees can directly mitigate the moral hazard problem by reducing franchisor and franchisee incentives for free riding. Such actions can also indirectly alleviate the adverse selection problem by signaling the franchisor's commitment to safeguard the quality of the business format to prospective franchisees. The attenuation of moral hazard within the franchise system strengthens the performance of the system as a whole, leading to lower failure rates among existing outlets. In addition, it reinforces the attractiveness of joining the franchisee network for prospective franchisees. The enhanced performance of outlets within the franchisee network and the increased appeal to prospective franchisees should lead to expansion of the franchisee network.

Hypotheses

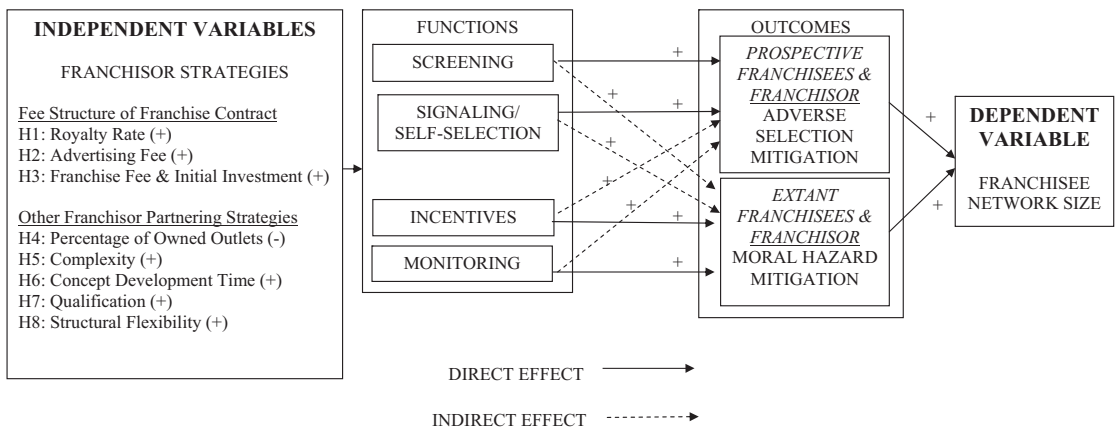
In this section, we deductively develop a slate of eight hypotheses pertaining to the eight predictors of our dependent variable: franchisee network size.⁷ These predictors are franchisor strategies that impact the attractiveness of the franchise concept for prospective franchisees and the management of exchange relationships with extant franchisees: (1) royalty rate, (2) advertising fee, (3) franchise fee and initial investment, (4) percentage of owned outlets, (5) complexity, (6) concept development time, (7) qualification, and (8) structural flexibility. Our conceptual framework and hypotheses are summarized in Figure 1.

Royalty Rate

The royalty rate (typically a percentage of sales) determines the share of a franchisee's

⁷We are grateful to two anonymous reviewers whose insights have enabled us to strengthen the theoretical reasoning underlying our hypotheses.

Figure 1
Theoretical Framework



revenues that go to the franchisor (Dant and Berger 1996). A lower royalty rate ensures that the franchisee keeps a higher share of the revenues, increasing the likelihood that the value of the franchise system to prospective franchisees will be high enough to attract them into the network. This rationale reflects the conventional wisdom among practitioners that lower entry and ongoing costs will facilitate franchisee network expansion. However, agency theory accommodates a positive relationship between the royalty rate and franchisee network size.

Royalties are often viewed by franchisors and franchisees as payments in return for services rendered (Combs and Ketchen Jr. 2003; Lafontaine 1992; Sen 1993). Thus, within the range of royalty rates typically observed in franchising, a higher royalty indicates that superior levels of ongoing services (in terms of quality, reliability, and/or magnitude) will be provided by the franchisor to franchisees. Shane (1998) noted that prospective franchisees may view the size of the royalty rate as an indicator of the franchisor's incentive to develop and safeguard franchise system assets. Prospective franchisees operate under conditions of imperfect information in evaluating different franchise business formats. Consequently, they may favorably view a higher royalty rate (relative to rates stipulated by other competing franchisors) as a signal of the superiority of ongoing services and support to be provided by the franchisor to

them. Thus, a higher royalty rate may help mitigate the *adverse selection problem from the perspective of a potential franchisee*.

A higher royalty may also reduce moral hazard by the franchisor and extant franchisees. Extant conceptual and theoretical modeling studies in franchising conclude that a higher royalty rate gives the franchisor a greater stake in the ongoing performance of the franchise system and reduces *franchisor moral hazard* (Bhattacharyya and Lafontaine 1995; Lal 1990; Mathewson and Winter 1985; Rubin 1978). Under these conditions, a franchisor is more likely to eschew free riding and live up to its commitments, in terms of training franchisees, developing new products and processes, and enhancing brand equity. Brickley and Dark (1987) found that higher royalty rates give the franchisor greater incentives to monitor franchisees and enforce contractual provisions to prevent franchisee free riding. Thus, relatively higher royalty rates (when accompanied by commensurate increases in franchisee monitoring by the franchisor that outweigh increased franchisee incentives to free ride) can also lead to lower extant *franchisee moral hazard*.

Taken together, the arguments outlined earlier suggest that, within the range of royalty rates typically observed in franchising, a relatively higher royalty rate lowers the likelihood of exit by extant franchisees (because of reduced moral hazard by the franchisor and other franchisees) and increases the pool of

qualified prospective franchisees keen to join the system (because of the franchisor's quality signaling). Hence, we posit the following:

H1: The royalty rate is positively related to franchisee network size.

Advertising Fee

Franchisees pay an ongoing advertising fee to the franchisor, for use toward ongoing advertising and other brand building services. This fee is typically expressed as a percentage of franchised outlet revenue (Dant and Berger 1996). The rationale expressed in the development of H1 applies here as well. A relatively higher advertising fee (within the range of advertising fees typically observed in franchising) alleviates the *adverse selection problem from the viewpoint of prospective franchisees*. It serves as an indicator of the franchisor's commitment to maintain and build brand equity through ongoing advertising services. High brand equity enhances attractiveness of the franchise concept to end users and makes participation in the franchise system less risky for a prospective franchisee. Guilloux et al. (2004) and Peterson and Dant (1990) found that the brand equity of the franchise system is one of the most important criteria used by prospective franchisees in selecting a franchise system. Guilloux et al. (2004) noted that prospective franchisees care about not only the franchisor's brand name but also the franchisor's efforts to maintain and develop the brand name through advertising.

A relatively higher advertising fee also creates safeguards against *franchisor moral hazard*, since it gives the franchisor a larger share of franchisee revenues and, therefore, a greater stake in the continued success of its franchisees. Brickley (1999) examined the association between the existence of externalities (and the potential for moral hazard) and the presence of advertising fees in franchise contracts. He concluded that the inclusion of mandatory advertising fees effectively sets one of the franchisee's inputs (advertising expenditure) at a minimum level and thereby removes

one of the dimensions for potential *franchisee moral hazard*.⁸

The stated arguments suggest that the presence and level of advertising fees have a positive impact on the reduction of adverse selection and moral hazard in the franchise system and, therefore, on franchisee network size:

H2: The advertising fee is positively related to franchisee network size.

Franchise Fee and Initial Investment

The franchise fee represents the fixed fee paid by a franchisee to the franchisor at the start of the business relationship. Franchisors also require franchisees to pay an initial investment amount, in exchange for initial fixed costs and services (e.g., real estate, insurance, building, furnishing, and equipment). Taken together, these initial fees can be viewed as upfront payments that compensate the franchisor for the expenses and effort associated with establishing a new franchised retail outlet (Lafontaine 1992; Sen 1993).

Conventional wisdom among practitioners (e.g., Chun 2008; Fell 2011) and extant research (Shane, Shankar, and Aravindakshan 2006) that emphasizes network expansion through the lowering of entry costs for franchisees posit a negative relationship between initial fixed fees and franchisee network size. In contrast, agency theory suggests a positive relationship between these fees and franchisee network size. Wu (1999) stated that higher initial fees help a franchisor overcome the agency problems associated with creating a brand name good. A higher initial fixed fee can alleviate the *adverse selection problem from the perspective of the franchisor*, as it acts as a mechanism for screening and qualifying prospective franchisees (Stump and Heide 1996). In this regard, Dnes (1992) found that both franchisors and franchisees recognize the screening role played by initial fixed fees stipulated in the franchise contract. Norton (1988), Shane (1996) and Shane (1998) indicated that the size of a franchisee's initial cash investment serves as a

⁸The presence and level of an advertising fee reduces the franchisee's share of outlet revenues. Prima facie, this creates greater incentives for franchisee free riding on other inputs. However, this incentive may be offset if the revenue creating impact of the franchisee's inputs is amplified by the greater levels of advertising and brand building undertaken by the franchisor (as a consequence of the higher advertising fee).

signal of franchisee quality—individuals signal their superior capabilities by making an investment where the returns from the investment are dependent on their own abilities to generate revenues.

Higher initial fixed fees may also mitigate the *adverse selection problem from the viewpoint of prospective franchisees*. Within the range of initial fixed fees observed, a relatively higher fixed fee indicates a greater level of initial franchisor services and investments for new franchisees. Guilloux et al. (2004) noted that prospective franchisees in France ranked startup support from the franchisor as the most important criteria for selecting a franchise system. Wu (1999) found support for the view that higher initial fees are positively associated with the upfront investments that franchisors make to help improve the quality of their franchisees. To the extent that prospective franchisees value these services and investments, they will be attracted to join franchise systems with higher initial fixed fees. A higher franchise fee and initial investment may also be regarded by prospective franchisees as signaling favorable private information about the underlying superiority of the franchise concept (Gallini and Lutz 1992). This view is reinforced by Castrogiovanni and Justis (2002), who found a positive association between startup costs and franchisor growth. To the extent that the ability to charge a price premium to end customers is an indicator of franchise concept quality, Wu (1999) found support for a positive relationship between initial fixed fees and the quality of the franchise concept.

Relatively higher initial fixed fees may also drive franchisee network size by reducing *franchisor and franchisee moral hazard*.⁹ Wu (1999) viewed high franchise fees and initial investments as bonds that discourage franchisees from free riding. He suggested that high initial fees may encourage franchisees to make the quality investments needed to maintain a franchisor's brand name and successfully differentiate the chain from competitors. Dnes (1992) noted that a franchisee's sunk

investments make it more motivated to perform. Lafontaine (1992) and Dnes (1992) suggested a positive relationship between franchise fees and specific investments by the franchisor to open each new outlet. Bercovitz (2000) found empirical support for this posited relationship. Specific investments can directly or indirectly (Kacker and Wu 2013) enhance overall exchange value in the franchisor–franchisee relationship. Moreover, the specific investments described earlier serve to lock both the franchisor and franchisees into the exchange relationship, thereby lowering the potential gains from moral hazard for either party. This further enhances business format value for the extant exchange partners (as well as prospective franchisees) and, therefore, facilitates the increase of franchisee network size:

H3: The franchise fee and initial investment is positively related to franchisee network size.

Percentage of Owned Outlets

In addition to determining the fee structure of the franchise contract, a franchisor makes a number of other strategic decisions that affect the size of its franchisee network. Foremost among them is the extent to which the franchisor relies on franchisees to operate outlets in the system, versus owning and managing them itself. Franchising has been viewed as an organizational form that allows a firm to overcome agency costs associated with operating franchisor-owned outlets (Blair and Lafontaine 2005; Brickley and Dark 1987; Combs and Ketchen Jr. 1999a, 1999b; Combs, Michael, and Castrogiovanni 2004; Combs et al. 2011; Lafontaine 1992; Mathewson and Winter 1985; Michael 1996; Rubin 1978).

A number of the agency-theory-based arguments used to explain the choice of franchising over operating owned outlets can also be used to support a negative relationship between the percentage of owned outlets and franchisee network size. A franchisee has a stronger residual claim to profits from its outlet

⁹It can be argued that higher initial fees could lead to greater franchisor moral hazard since the franchisor-specific nature of a franchisee's initial investments exposes it to holdup by the franchisor. Dnes (1992) discounted this argument by noting that franchise contracts are often written to ensure that franchisor appropriation of franchisee assets and investments is restricted to situations of franchisee failure. Indeed, this element of franchise contracts may instead alleviate the franchisee moral hazard problem by motivating franchisees to succeed in operating their franchised outlets.

operations than does a corporate manager at a franchisor-owned outlet. This suggests relatively lower levels of operator shirking and, therefore, reduced franchisor oversight (Krueger 1991; Norton 1988) at franchised outlets. This implies that, for any given level of monitoring capacity, a franchisor should be able to effectively monitor a larger number of franchised outlets than owned outlets. Thus, the lower the percentage of owned outlets, the greater is the number of franchised outlets that can be effectively monitored by the franchisor. Alternatively, for any given level of monitoring capacity, a franchisor should be able to more effectively monitor a specific number of franchised outlets than the same number of owned outlets, leading to lower ex-post agency costs at the outlet level. Shane (1996) noted that agency problems associated with firm growth are lower when a high percentage of outlets are franchised.

The ownership incentives obtained by franchisees reduce moral hazard associated with suboptimal or misdirected effort when compared with franchisor-owned outlets. The likelihood of *franchisee moral hazard* is also curtailed by the reduced costs of monitoring franchisees (compared with owned outlets) for the franchisor. This enhances the value of the business format for extant exchange partners, strengthens the competitive position of the franchise system, and makes joining it more attractive for prospective franchisees. Therefore,

H4: The percentage of owned outlets is negatively related to franchisee network size.

Complexity

Franchisors vary in the complexity of their franchise concepts. Shane (1998)¹⁰ defined the complexity of a franchisor's business format as a count of the number of different support services that the franchisor contracts to provide to the franchisee as part of the franchising package. The nature and magnitude of these primarily ongoing services can help to

differentiate and strengthen the franchise concept and safeguard brand equity. Thus, the ongoing services that a franchisor commits to provide to franchisees can be viewed as a signal of franchisor quality by franchisees. Peterson and Dant (1990) found that training provided by the franchisor to franchisees was the top ranked factor influencing the selection of franchise systems by prospective franchisees. Thus, greater complexity alleviates the *adverse selection problem from a prospective franchisee's perspective* and favorably impacts franchisee network size.

It is likely that a franchisor has to make larger investments to provide the ongoing services associated with more complex franchise concepts. These investments increase the franchisor's stake in the performance of the franchise system. This reduces the likelihood that a franchisor free rides on efforts of franchisees and, thus, lowers *franchisor moral hazard*.

To the extent that complex franchise concepts involve greater centralization of activities in the franchise system (e.g., centralized data processing, centralized purchasing), they are accompanied by lower *franchisee moral hazard* (Scott 1995). Drawing on the reasoning of Brickley (1999), the greater the volume of services and inputs provided by the franchisor, the fewer are the dimensions on which a franchisee can provide suboptimal or misdirected effort. When a franchisor provides an extensive range of ongoing services to a franchisee, their relationship will be characterized by greater interaction. This, in turn, leads to lower franchisee free riding and improved franchisee sales revenues and performance (Kidwell, Nygaard, and Silkoset 2007).

The reduction of adverse selection and moral hazard problems in more complex franchise concepts leads to our positing that greater complexity positively impacts franchisee network size:

H5: Greater franchise concept complexity is positively related to franchisee network size.

¹⁰Shane (1998) drew on agency theory to hypothesize a positive relationship between franchise concept complexity and franchise system failure. He posited that increases in complexity result in higher monitoring costs. Note that Shane (1998) looked at a different pool of franchisors (new franchisors only) and a different performance variable (franchise system failure). It is possible that the complexity of a franchise concept may create monitoring challenges for a new franchisor but that, if it survives and operates for some time, the franchisor will develop the ability to effectively undertake this monitoring.

Concept Development Time

Lafontaine and Shaw (1998) found the primary driver of franchisor survival to be the number of years that the franchisor has been in business before starting to franchise. They suggested that franchisors that spend more time developing their franchise concept (in terms of product or service prototypes, operating procedures, and documentation) are more likely to succeed in franchising. Lafontaine (1992) viewed this period of being in business but not franchising as an indicator of the difficulty and cost of developing the franchise concept while Lafontaine and Shaw (2005) viewed it as a proxy for the value of a franchisor's brand. When a franchisor spends a greater amount of time developing the business concept before commencing franchising, it is often able to fully dedicate its resources to creating a superior franchise concept. Taken together, these views suggest that the time taken by the franchisor to develop its franchise concept before franchising contributes to its uniqueness and competitive strength. Therefore, prospective franchisees may view this concept development time as a signal of franchisor quality. In this manner, greater concept development time alleviates the *adverse selection problem from the viewpoint of prospective franchisees*.

When a franchisor spends more time developing its franchise concept prior to franchising, it may make greater investments. It also develops a more valuable brand (Lafontaine and Shaw 2005). Consequently, it is less likely to engage in behavior that jeopardizes these investments and brand name assets. This suggests that longer concept development times lead to lower *franchisor moral hazard*.

Simultaneously developing and refining a business concept as well as undertaking the recruitment of franchisees and establishing a franchise system can overwhelm a franchisor's managerial capacity. Hence, a relatively large time gap between the initiation of business operations and commencement of franchising by a franchisor ensures that a competitive franchise concept is fully developed prior to initiation of franchising. This enables the franchisor to more clearly and fully define franchisee processes and tasks as well as monitoring procedures, thereby lowering opportunities for franchisee free riding. Additionally, it allows the franchisor to fully concentrate on franchisee monitoring once it

commences franchising, further lowering the likelihood of *franchisee moral hazard*.

In sum, greater concept development time should alleviate the adverse selection problem from the viewpoint of prospective franchisees and reduce moral hazard by extant firms in the franchise system. Therefore,

H6: Greater concept development time is positively related to franchisee network size.

Qualification

Franchisors vary in the requirements and qualifications they impose on prospective franchisees. Bergen, Dutta, and Walker (1992) posited that prequalifying exchange partners can substantially alleviate adverse selection problems. There is considerable empirical support for this view (Stump and Heide 1996; Wathne and Heide 2004). The use of qualification standards by the franchisor creates a self-selection opportunity for high-quality prospective franchisees. Thus, increased qualification requirements reduce the *adverse selection problem from the perspective of the franchisor*. This is reflected in extant research that shows the use of prior experience as a screening mechanism is negatively related to franchisee failure (Michael and Combs 2008) and new franchise system failure (Shane 1998).

The addition of qualified franchisees that operate within a system with lowered agency costs is likely to increase the value of the franchise concept and make it easier to attract similarly qualified prospective franchisees in the future. Indeed, the presence of these rigorous qualification requirements sends a clear signal to prospective franchisees about the quality of existing franchisees. In this manner, qualification mitigates the *adverse selection problem from the perspective of prospective franchisees*.

Strict qualification standards may indirectly lower *franchisee moral hazard*. If an extant franchisee recognizes that new franchisees will be carefully screened, it is less likely to expect them to engage in horizontal free riding. This reduces its own incentives to provide poor effort.

The rationales in the preceding paragraphs suggest that rigorous qualification standards directly reduce adverse selection problems and indirectly lower franchisee moral hazard. Thus,

H7: Greater qualification of franchisees is positively related to franchisee network size.

Structural Flexibility

Structural flexibility allows a firm to better adapt to dynamic environments (Volberda 1996), enabling it to successfully expand over time. One manifestation of this flexibility is the customization of exchange relationships with partners (Doney and Cannon 1997). In franchising, structural flexibility is reflected in initiatives used by a franchisor to customize relationships with franchisees. These include the use of multiunit franchising and area development agreements, sub-franchising or master franchising, and conversion franchising. We posit that these initiatives aid expansion of franchisee networks by lowering agency costs.

Multiunit franchising (whether through area development agreements or sequential expansion) can facilitate the development of large franchisee networks by reducing *adverse selection problems from the perspective of the franchisor*. Kaufmann and Dant (1996) found that the use of multiunit franchising by a franchisor enables it to draw high-quality, well-resourced franchisees into its system. Multiunit franchising facilitates franchisee self-selection, in terms of attracting franchisees that have the ability to successfully operate multiple franchised outlets.

Multiunit franchising allows franchisees to internalize externalities and reduce spillover effects, limiting horizontal free riding by other franchisees (Brickley 1999). Perryman and Combs (2012) found that outlets operated by multiunit franchisees are located close to each other as well as to the multiunit franchisee's headquarters. Consequently, the likelihood of horizontal free riding by another franchisee is reduced and the multiunit franchisee is easily able to monitor operations at its various outlets. Since a franchisee with an area development agreement has the sole authority to develop outlets within its designated territory, it faces reduced encroachment risk and is more willing to make value-enhancing specific investments (Azoulay and Shane 2001). Bercovitz (2002) found that multiunit franchising enhances the downstream rent potential for franchisees,

thereby creating the front-end of self-enforcing agreements and lowering the potential for franchisee moral hazard (Klein 1980). The potential to add new outlets acts as a strong incentive to franchisees to preserve standards, safeguard the franchisor's brand name at their existing outlets, and refrain from suboptimal or misdirected effort (Bradach 1997). Gillis et al. (2011) viewed multiunit franchising through the incentive-based lens of tournament theory and conclude that new outlets are prizes given out to the best performing extant franchisees. Taken together, these arguments indicate that multiunit franchising enhances franchisee incentives and, thereby, lowers the likelihood of *franchisee moral hazard*.

Under master franchising (also known as sub-franchising), a franchisor does not sell franchises directly to outlet operators. Instead, it sells territories to a master franchisee (sub-franchisor) who then sells franchises to individual outlet operators. The master franchisee performs key functions on behalf of the franchisor (including the selection and monitoring of individual franchisees) and is associated with higher system growth rates (Kaufmann and Kim 1995). Although master franchising results in an additional layer of hierarchy, it also involves delegation of regional expansion decisions to an entity more familiar with the region (Justis and Judd 1986). The regional expertise and knowledge possessed by the master franchisee enables it to more effectively screen prospective franchisees, thus lowering the *adverse selection problem from the perspective of the franchisor*.

A master franchisee's familiarity with its region of operation makes it more effective in monitoring franchisees. This is particularly so when a franchisor, faced with the "entrepreneurial capacity problem" (Norton 1988), is unable to fully monitor franchisees on its own. Franchisee monitoring by the master franchisee, particularly when coupled with an additional level of individual outlet monitoring (by the franchisor), reduces *franchisee moral hazard*.¹¹

¹¹There are arguments in the franchising literature for positive effects of the use of master franchising on franchisee moral hazard. For example, Shane (1998) posited and found a positive relationship between the use of master franchising and franchise system failure. However, this view must be considered in the context of the sample of new franchisors studied by him. Shane (1998) noted that the use of master franchising requires codification of enforcement behavior and that this enforcement behavior must either be specified at the time of contracting or be foregone. This is particularly challenging for a new franchisor that is likely to

Conversion franchising involves the recruitment of franchisees from other chains and franchise systems. Franchisors who use conversion franchising acquire experienced franchisees that require lower training costs (Hoffman and Preble 2003). This mitigates the *adverse selection problem from the perspective of the franchisor* and facilitates franchisee network expansion.

Taken together, the different structural flexibility initiatives discussed earlier (multiunit franchising, master franchising, and conversion franchising) positively impact franchisee network size by reducing adverse selection (from the perspective of the franchisor) and lowering franchisee moral hazard. This leads to

H8: Greater structural flexibility is positively related to franchisee network size.

The effects, on agency costs, of the different franchisor strategies considered by us are summarized in Table 2.

Control Variables

We also investigate the effects of four control variables on franchisee network size. Two of these variables (age and size of the organization) are commonly used in interorganizational research for control purposes, since they are expected to impact various theoretically vested relationships in a systematic fashion. The third control variable, the percentage of units in the United States, is unique to the context at hand—franchising has its genesis in the United States, and therefore its domestic percentage may have some systematic effects on franchisee network size. Our final control variable is lagged—franchisee network size in the previous time period.

Data

We test our hypotheses using secondary data drawn from the widely used Bond's Franchise Guides that have been published from 1985 onwards.¹² In contrast to Shane, Shankar, and Aravindakshan (2006) and Kosová and Lafontaine (2010), we chose to use a smaller balanced panel rather than a larger unbalanced panel. Our choice was guided by concerns about the time series aspects of the data analysis. A balanced panel is necessary to test for a common panel unit root, to facilitate the assessment of nonstationarity and panel cointegration in the data. This test, which enhances the rigor of our empirical analyses, would not be possible had we used an unbalanced panel.

A balanced panel requires the presence of data for every year for each firm in the panel. Thus, there is a tradeoff involving the number of years of data and the list-wise sample size across those years for the variables of interest. We ultimately settled on the years 1995–2004 (i.e., 9 years) with an annual sample size of $N = 76$. Any franchisor listed in Bond's for all of these 9 years was included in the balanced panel. Our econometric analysis is based on panel data with $N = 684$ (9 years \times 76) cases. In our assessment, this panel has sufficient breadth (in terms of the number of franchisors) and length (in terms of years of data) for our dynamic panel model estimation. The 76 franchisors in our sample cover 23 of the 50 industry sectors contained in Bond's Franchise Guide for 1994.¹³ If we had chosen a larger number of years for the balanced panel, there would have been considerable attrition in the number of franchisors in the panel. If we had opted for a larger number of franchisors in the balanced panel, we would have had to reduce the number of years of data used, potentially inhibiting insights from the investigation of temporal variations in the panel.

be unable to foresee all possible mechanisms for franchisee shirking. We note, again, that we differ from Shane (1998) in terms of the types of franchisors (new franchisors only versus franchisors of all ages) and organizational performance measures (franchise system failure versus franchisee network size) studied. In our assessment, if a franchisor survives and operates for some time (and, in the process, acquires knowledge about different forms of franchisee shirking), it may be in a better position to codify enforcement behavior in master franchise agreements and realize the franchisee moral hazard reducing benefits of master franchising.

¹²No Guides were published for the years 1986, 1987, 1990, and 2000.

¹³Although our panel data set covers a number of industries, our fixed effect estimation approach (that accounts for unobserved heterogeneity) alleviates the need for industry-specific control variables in our model.

Table 2
Effects of Franchisor Strategies on Agency Costs

	Franchisor's Adverse Selection Problem Mitigation	Prospective Franchisee's Adverse Selection Problem Mitigation	Franchisor Moral Hazard Mitigation	Extant Franchisee Moral Hazard Mitigation
Royalty Rate		+	+	+
Advertising Fee		+	+	+
Franchise Fee and Initial Investment	+	+	+	+
Percentage of Owned Outlets				-
Complexity		+	+	+
Concept Development Time		+	+	+
Qualification	+	+		+
Structural Flexibility	+			+

We present details of the operationalizations of our variables and constructs in Table 3.

Our operationalizations are largely either definitional (e.g., franchisee network size, royalty rate, advertising fee, franchise fee and initial investment, percentage of owned outlets) or based on operationalizations in extant research (i.e., complexity, concept development time, qualification). Our operationalization of structural flexibility is based on conceptual definitions of the construct in the extant literature.

Analyses and Results

As when doing traditional time series analysis, we first test for nonstationarity (i.e., we test for a panel unit root).¹⁴ If we find that the

variables in the panel are nonstationary, we need to ensure that we avoid the spurious regression problem. To do this, we test for panel cointegration. This means that we test for a long-run relationship between the variables that is stationary even though the data series themselves are nonstationary. If the tests indicate a cointegration relationship between the nonstationary variables, we proceed with estimating this long-run relationship using appropriate panel estimation techniques. If the tests indicate that there is no cointegration relationship, then there is no long-run equilibrium to estimate. Note that the tests for a common unit root and panel cointegration require balanced panels.

¹⁴Econometric analysis has traditionally consisted of cross-sectional analysis, time series analysis, or panel data analysis with a small and fixed time series dimension. There has been a growing interest in studying cross-sectional data over time, entailing the use of panel data models with both a large number of cross-sectional units and a large number of time series observations. When working with panel data that has a large time series dimension, we gain additional power over traditional time series analysis from the increased observations in the cross-section dimension, but we must deal with potential nonstationarity in the time series dimension of the data. Recent research has improved our ability to analyze nonstationarity, cointegration, and the spurious regression problem in panel data. These issues have been examined extensively in pure time series (Engle and Granger 1987), but only recently have they been studied in detail in panel data models. These new panel data methods are extensions of the traditional time series methodology, using the additional information gained from the cross-section dimension of the panel. Testing for unit roots in pure time series studies is a common practice among applied researchers. For the nontechnical reader, it is important to point out that the terms unit root, nonstationarity, and random walk (process) mean the same thing and can be used interchangeably. These terms mean that the data series under consideration can be written as $y_t = y_{t-1} + \varepsilon_t$, for the case of a random walk without drift or $y_t = \alpha + y_{t-1} + \varepsilon_t$, for the case of a random walk with drift (constant term) where y_t is the data series and ε_t is white noise (Hamilton 1994).

Table 3
Operationalizations of Constructs

Construct/Variable	Hypotheses	Operationalization
Franchisee Network Size		Total number of franchised outlets in the franchise chain
Royalty Rate	H1	Percentage of sales that a franchisee pays as a royalty to the franchisor on an ongoing basis
Advertising Fee	H2	Percentage of sales that a franchisee pays to the franchisor on an ongoing basis to be used toward advertising
Franchise Fee and Initial Investment	H3	Sum of the dollar amount paid by a franchisee to the franchisor as an upfront franchise fee and the dollar amount of expenditures incurred by a franchisee to open an outlet
Percentage of Owned Outlets	H4	Percentage of franchisor-owned outlets in the franchise chain.
Complexity	H5	Count of the number of ongoing services provided by the franchisor to franchisees: <ul style="list-style-type: none"> • Central Data Processing • Central Purchasing • Field Operations Evaluation • Field Training • Initial Store Opening • Inventory Control • Franchisee Newsletter • Regional or National Meetings • 800 Telephone Hotline (Based on Shane 1998)
Concept Development Time	H6	Gap, in years, between the calendar year of system establishment and calendar year of first franchise sale (Based on Lafontaine and Shaw 1998)
Qualification	H7	Summation of franchisor ratings (Unimportant = 1, Very Important = 5) of the importance of criteria used to qualify potential franchisees. The following criteria were evaluated: <ul style="list-style-type: none"> • Financial Net Worth • General Business Experience • Specific Industry Experience • Formal Education • Psychological Profile • Personal Interview (Based on Wathne and Heide 2004)
Structural Flexibility	H8	Count of the number of Yeses (Yes = 1, No = 0) for <ul style="list-style-type: none"> • Area Development Permitted? • Sub Franchising Permitted? • Expansion in Territory Permitted? • Conversions Permitted?
Franchisor Age		Current calendar year minus calendar year of the first franchise sale by the franchisor
Franchisor Organization Size		Size of corporate (franchisor) staff
Percentage of Outlets in the United States		Percentage of U.S. Outlets Relative to Total Outlets.
Franchisee Network Size in Previous Year		Total number of franchised outlets in the franchise chain in the previous year.

In our cointegration analysis, all panel estimations and inferences were carried out using EViews 6.0. In order to consider the issue of panel cointegration, we first test for a panel unit root in each of the variables. Descriptive statistics and correlation coefficients are contained in Table 4. Results for the panel unit root tests are presented in Table 5.

We use the panel unit root tests suggested by Levin, Lin, and Chu (2002), with intercept terms in the test equation. When testing for a panel unit root, the null hypothesis is that there is a panel unit root, that is, the data series is nonstationary. The results of the Levin, Lin, and Chu (2002) unit root test with individual effects included in the test equation indicate that the null hypothesis of a common panel unit root can be rejected for every variable. In other words, all variables can be treated as stationary. If the data were nonstationary, the t-statistics would diverge unless there was a cointegrating relationship. Since all variables appear not to have a panel unit root, there is no spurious regression problem and the t-statistics using traditional estimation will be reliable. Thus, we continue to the estimation stage without having to test for panel cointegration.

In estimating our model, it is important to control for unobserved heterogeneity to rule out the confounding effects of unobserved characteristics on which franchisors may vary (Gonzalez-Diaz and Solis-Rodriguez 2012; Shane, Shankar, and Aravindakshan 2006). Failure to control for this unobserved heterogeneity results in biased regression estimates (Heckman 1981). These estimates may also be rendered biased by endogeneity problems with some of our regressors (Gonzalez-Diaz and Solis-Rodriguez 2012; Shane, Shankar, and Aravindakshan 2006). In keeping with the extant literature (e.g., Shane, Shankar, and Aravindakshan 2006), we considered royalty rate, advertising fee, franchise fee and initial investment, and percentage of owned outlets as endogenous variables. To account for endogeneity, we used instrumental variables that would satisfy two conditions: (1) instrument relevance—the instrument must be correlated with the endogenous variable—and (2) instrument exogeneity—the instrument must not be correlated with the disturbance. We used instruments that included lags of endogenous variables, all exogenous variables, and dynamic period-specific (predetermined) instruments. The use of lagged independent variables to

account for endogeneity is also in keeping with practices widely adopted in extant franchising research (Combs, Michael, and Castrogiovanni 2009; Gonzalez-Diaz and Solis-Rodriguez 2012; Lafontaine 1992; Mitsuhashi, Shane, and Sine 2008; Shane, Shankar, and Aravindakshan 2006). Additionally, these instruments are required, by the dynamic panel GMM estimation methods we use, to identify and estimate the model. Gonzalez-Diaz and Solis-Rodriguez (2012) noted that Arellano and Bond (1991) recommended that lagged values of endogenous independent variables in the model should be used as instruments.

We estimate our model using Arellano and Bover dynamic panel GMM estimation (Arellano and Bover 1995). In the Arellano and Bover method, both the weight matrix and coefficients are updated (i.e., re-estimated iteratively) until convergence. This approach often yields better finite sample properties of the estimators than other approaches such as the Arellano and Bond (1991) two step method (where the GMM weight matrix is updated once and the final coefficients are then estimated) and the two stage least squares fixed effects approach. The Arellano and Bover approach accounts for unobserved heterogeneity and endogeneity in the data. We use orthogonal deviations to remove the fixed effects terms and White period robust SEs that are robust to innovations that have time series correlation structure that varies by cross-section.

Our estimation results (and hypothesized effects) are summarized in Table 6.

The descriptive statistics in Table 4 reveal relatively high correlations involving three pairs of independent and control variables: 0.94 between concept development time and structural flexibility; 0.82 between concept development time and percentage of outlets in the United States (a control variable); and 0.77 between structural flexibility and percentage of outlets in the United States. High pairwise correlations are only a sign of potential multicollinearity. However, for concept development time and structural flexibility, we believe that multicollinearity is not a problem. Note, from Table 6, that the estimated coefficients on each are highly significant. If multicollinearity between these variables was a serious problem, the standard errors would be inflated and the estimated coefficients would not be statistically significant.

As a further test of the robustness of our model, we re-estimated it twice. In the first

Table 4
Descriptive Statistics and Correlation Coefficients

Variable	Mean (Std. Dev.) ^a	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) Franchisee Network Size	176.41 (208.85)	1											
(2) Royalty Rate	5.91 (4.42)	0.05	1										
(3) Advertising Fee	1.53 (1.60)	0.01	-0.16	1									
(4) Franchise Fee and Initial Investment	224,789.80 (310,304.60)	0.11	-0.07	0.15	1								
(5) Percentage of Owned Outlets	11.34 (18.58)	-0.20	-0.15	0.03	0.14	1							
(6) Complexity	6.71 (1.35)	0.001	-0.03	0.16	0.27	0.10	1						
(7) Concept Development Time	5.61 (8.85)	-0.06	-0.06	0.07	0.03	0.11	0.12	1					
(8) Qualification	19.84 (3.58)	0.77	0.07	0.12	0.17	-0.20	0.15	0.03	1				
(9) Structural Flexibility	2.29 (1.00)	0.80	0.07	0.10	0.18	-0.18	0.12	0.94	0.02	1			
(10) Franchisor Age	24.38 (10.70)	0.33	0.19	0.12	0.21	-0.17	-0.07	0.36	-0.07	0.36	1		
(11) Franchisor Organization Size	37.33 (60.88)	0.33	0.16	-0.02	0.19	0.13	0.11	0.40	0.19	0.39	0.29	1	
(12) Percentage of Outlets in the United States	79.73 (33.91)	0.44	0.05	0.16	0.19	-0.18	0.22	0.82	0.02	0.77	0.27	0.29	1

^aThe number of observations for each variable = 9 × 76 = 684.

Table 5
Tests for Panel Unit Root^a

Variable	Hypotheses	Unit Root Test (Levin, Lin, and Chu 2002)
Franchisee Network Size		0.0000
Royalty Rate	H1	0.0000
Advertising Fee	H2	0.0005
Franchise Fee and Initial Investment	H3	0.0000
Percentage of Owned Outlets	H4	0.0000
Complexity	H5	0.0000
Concept Development Time	H6	0.0010
Qualification	H7	0.0000
Structural Flexibility	H8	0.0000
Franchisor Age		0.0005
Franchisor Organization Size		0.0000
Percentage of Outlets in the United States		0.0000
Franchisee Network Size in Previous Year		0.0000

^aThe results of the Levin, Lin, and Chu (2002) unit root test with individual effects included in the test equation indicate that the null hypothesis of a common panel unit root can be rejected for every variable. In other words, all variables can be treated as stationary. Thus, there is no spurious regression problem and there is no need to test for panel cointegration.

re-estimation, we dropped structural flexibility as a predictor (keeping concept development time and the control variable—percentage of outlets in the United States—in the model). In the second re-estimation, we dropped concept development time as a predictor (keeping structural flexibility and the control variable—percentage of outlets in the United States—in the model). For both estimations, we observed that the effects for the independent variables that remained in the model were statistically significant and at levels almost identical to those observed for the full model.¹⁵

In assessing potential misspecification of the model, we use the Sargan statistics (Sargan 1958) to test the null hypothesis that the over-identifying restrictions are valid. The nonsignificance of the Sargan test is a necessary condition for helping to establish the validity of our instruments. The results do not reject the null hypothesis and support the validity of our instruments.

The coefficients for the individual predictors (in Table 6) can be construed in a manner

similar to interpreting OLS coefficients, in terms of the variable coefficient being related to the size of the underlying latent variable. In other words, the absolute value of the coefficient depends on the units in which the predictor is measured. Therefore, for example, the coefficient for franchise fee and initial investments is low even though the effect is significant—this is because the variable is measured in \$ and the mean for this variable is \$224,789.8.

The coefficients on the independent variables are short-run multipliers, that is, the impact of a change in X on Y in this period. The coefficient on the lagged value of network size can be used to calculate the long-run multipliers for each variable, that is, total impact over time of a change in X on Y. The long-run multiplier is the estimated coefficient on X multiplied by $\{1/(1 - \text{estimated coefficient on lagged dependent variable})\}$, that is, $\beta (1/(1 - \delta))$.

For the individual predictors, we find statistically significant support for seven of our eight hypotheses—H1, H2, H4, H5, H6, H7, and H8 are supported by the estimation results. A

¹⁵In the interests of brevity, we have not included the re-estimation results in the paper. These results can be requested from the authors.

Table 6
Summary of Hypotheses and Estimation Results^a

Independent variable	Hypotheses	Hypothesized Effect	Arellano and Bover Dynamic Panel GMM; White Period Robust SEs* Coefficient (Sig)
Royalty Rate	H1	+	22.6 (0.0000)
Advertising Fee	H2	+	56.05 (0.0000)
Franchise Fee and Initial Investment	H3	+	-0.00004 (0.0000)
Percentage of Owned Outlets	H4	-	-7.87 (0.0000)
Complexity	H5	+	19.82 (0.0001)
Concept Development Time	H6	+	2.82 (0.0076)
Qualification	H7	+	45.97 (0.0068)
Structural Flexibility	H8	+	10.83 (0.0326)
Franchisor Age			-2.22 (0.0089)
Franchisor Organization Size			1.78 (0.0000)
Percentage of Outlets in the United States			0.24 (0.3837)
Franchisee Network Size in Previous Year			0.17 (0.0000)
			Sargan test**
			<i>p</i> -value = 0.1946

^aOne-sided *p*-values are reported in parentheses. Instruments include lags of endogenous variables, all exogenous variables, and dynamic period-specific (predetermined) instruments.

*White period robust SEs are robust to innovations that have time series correlation structure that varies by cross-section.

**Sargan test: null hypothesis is that the over-identifying restrictions are valid.

higher royalty rate, higher advertising fee, smaller percentage of owned outlets, greater complexity, longer concept development time, greater use of qualification procedures, and more structural flexibility are associated with larger franchisee network size. For H3, the results are the opposite of what we predicted—the franchise fee and initial investment are significantly negatively related to franchisee network size. One potential explanation for this is that franchise chains with much larger physical retail outlets are likely to have higher initial

investment fees attached to them. The large size of these outlets may create a bigger minimum efficient scale for their operation, leading to a lower franchisee network size.¹⁶

Effects for three control variables (franchisor age, franchisor organization size, and franchisee network size in previous year) are also significant. As expected, there is a strong positive relationship between the dependent variable and the franchisee network size in the previous time period. In terms of direction of effects for the control variables, there were two

¹⁶We are grateful to an anonymous reviewer for another potential explanation for the significant negative relationship between the initial fixed fees and franchisee network size. This explanation revolves around the chronological context of our data. Our data set covers the period 1995–2004. This was the time during which property prices experienced substantial appreciation in the United States and represented an attractive asset class for investments. The return on investment offered by the franchises with high initial fixed fees may have been less attractive compared with property investment alternatives. At lower levels of initial fixed fees, prospective franchisees may not have had similarly attractive property investment alternatives available to them.

surprises: franchisor age had a significant negative effect and the percentage of outlets in the United States had a nonsignificant effect on franchisee network size.

In sum, we find that for most of the predictors, the agency-theory-based rationales for their effects on franchisee network size are supported. It is worth noting that many of the variables that had previously been ignored in explaining franchise or total system size (e.g., complexity, concept development time, qualification, and structural flexibility) are found to have a statistically significant effect on franchisee network size.

These results, taken together, largely negate the conventional wisdom among practitioners that key drivers of a franchisor's franchisee network size are strategies that simply lower entry, and ongoing costs and barriers for prospective franchisees. It is important to note that the estimation results do not rule out the existence of the effects proffered by this perspective. Rather, these effects may be weaker than those occurring in the opposing direction and supported by our agency-theory-based reasoning. Indeed, it is the agency cost reducing properties of the franchisor strategies examined here that primarily drive franchisee network size.

Discussion

Our findings generate valuable insights for franchising practice. What should a franchisor do to have a large franchisee network? It can expand franchisee network size by taking time to develop, refine, and test its business format prior to franchising it. This results in a stronger franchise concept as well as more developed franchisor capabilities for supporting and monitoring franchisees. A relatively long lag between founding the business and starting franchising can be interpreted as a signal of franchisor quality by prospective franchisees and motivate more of them to join the franchisee network. Expansion of the franchisee network is also facilitated when franchisor quality is signaled through relatively higher royalty rates and advertising fees. These ongoing fees (as well as franchise concept complexity) communicate the franchisor's commitment to provide ongoing services and advertising support to franchisees. The use of rigorous criteria for qualifying franchisees alleviates concerns of prospective franchisees that other franchisees will abuse their membership

in the system. Finally, franchisee network size is increased when the franchisor limits its reliance on franchisor-owned outlets and embraces structural flexibility in designing exchange with franchisees. A number of these strategies further facilitate franchisee network expansion by lowering free riding by the franchisor and extant franchisees in the network.

Our results counter the conventional wisdom among practitioners that a franchisor can rapidly grow by reducing entry and continuing costs for prospective franchisees via minimal franchisee qualification requirements and low ongoing royalty and advertising fees. Although these actions may result in an expanded pool of prospective franchisees interested in joining the franchise system, they do not translate into greater franchisee network size. By maintaining relatively higher royalty and advertising fees as well as imposing rigorous qualification standards, a franchisor may have a smaller overall pool of interested prospective franchisees, but these franchisees are likely to be of higher quality and in a better position to contribute to brand equity and strengthen system reputation. The higher ongoing fees also provide appropriate means and incentives to the franchisor to maintain and enhance the franchise concept and brand equity. Thus, these policy decisions allow the franchisor to operate and expand the franchisee network effectively, and continue to attract high-quality franchisees.

Limitations of our research include the range of franchisors to which our findings apply, the franchisor decision variables we consider, and some of our construct operationalizations. Business format franchisors that use a flat dollar royalty (albeit a rare occurrence) are outside the scope of our theoretical model. Additionally, our findings do not extend to product-name franchisors (that do not charge royalties but extract rents from franchisees through markups on products supplied to them). One limitation of the choice of franchisee network size as a measure of performance is that it may be influenced by variables not included in our model—for example, the personal values and objectives of franchisors, the amount of money spent on franchise marketing to prospective franchisees, and corporate strategy shifts that emphasize franchise buybacks or refranchising. Our estimation approach includes firm fixed effects and, therefore, accounts for many of these sources of unob-

served heterogeneity. However, an understanding of the nature and magnitude of the effects of these variables may be of interest to franchising practitioners. Finally, some of our predictors (e.g., complexity, qualification, and structural flexibility) are operationalized using count-based measures. Such count-based measures have been frequently used in franchising research (e.g., Shane 1998). However, in using such measures, researchers make an implicit assumption that a larger count of items for a construct is equivalent to a higher magnitude of that construct. In addition, this approach indicates that two firms are viewed to have the same magnitude of a construct if they have the same count of items for that construct, even if the specific items differ across them.

We make a number of theoretical and methodological contributions to research in franchising. Many researchers have studied the factors that influence the size and growth of a franchisor's overall system of franchised and company owned outlets. However, to our knowledge, a specific and focused investigation of the drivers of the size of a franchisor's franchisee network has never been undertaken. The importance of such an investigation is underscored by the fact that factors that influence the size of the total network and of the franchisee network may differ and should be disentangled. Moreover, a number of franchisor strategic decisions are specifically designed to impact franchised outlets, and the effectiveness of these decisions should be measured with the yardstick of franchisee network size rather than total network size. Therefore, we make an important contribution to the franchising literature by specifically investigating the drivers of a franchisor's franchisee network size.

Agency theory has been previously applied to understand key franchisor decisions such as whether it should rely on franchising, the extent to which it should do so, and the design of the franchise contract. We draw on this theory to explain variations in franchisee network size. We find that this perspective provides a better explanation for franchisee network size than the financial cost-based conventional wisdom. Much of the extant agency theory research in franchising has focused on studying either adverse selection (concerning prospective franchisees) or moral hazard (revolving around extant franchisees) problems. We contribute to this stream of research

by jointly studying the adverse selection and moral hazard problems faced by franchisors. We describe how the same set of franchisor strategies have ramifications for both the adverse selection and moral hazard problems in the system and explain how franchisor strategies designed to directly impact one problem may also indirectly affect the other.

Our contributions on the empirical front include the use of a broad group of franchisors and franchisor decision variables as well as econometric analysis that checks for nonstationarity and accounts for endogeneity and unobserved heterogeneity. We provide more exhaustive coverage of the franchisor universe by including franchisors of all ages and size. Our sample comprises of public and privately held franchisors from a wide range of industries, in keeping with the calls for such samples from Gillis and Castrogiovanni (2012). We use a richer set of explanatory variables than any previous studies of franchise or total system growth. This decision is justified by the empirical results that show a statistically significant effect on franchisee network size of many franchisor strategies (e.g., concept development time, complexity, qualification, and structural flexibility) that had not been considered in previous research on drivers of network size. Finally, we estimate our dynamic panel data models with a concern for potential nonstationarity, endogeneity, and unobserved heterogeneity. To our knowledge, no previous empirical studies of network size and performance in franchising have done this. Even though we ultimately find no evidence of nonstationarity in our data, checking for it prior to model estimation is important as it helps safeguard against drawing inferences from potentially spurious estimates. We use Arellano–Bover dynamic panel GMM estimation (Arellano and Bover 1995) with White period robust SEs that are robust to innovations that have time series correlation structure that varies by cross-section. In our view, this estimation method enhances the rigor observed in previous panel data studies in franchising.

Given the relative paucity of research on franchisee network size and growth, this is a fertile area for future research. Though we focus on using agency theory to explain variations in franchisee network size, future research could combine it with other institutional economics and organization theory perspectives to refine explanatory insights. This

would echo the integrative approach of Combs and Ketchen Jr. (1999a, 1999b), who draw on agency and resource acquisition theories to jointly explain the extent to which a franchisor uses franchising. Future research could also aim to understand how the importance of different drivers of franchisee network size changes over the lifecycle of a franchise system. The role of the broader economic context (in terms of the health of the overall economy and its implications for alternative investment opportunities for prospective franchisees) could be considered by examining the posited relationships in different business cycles. Additionally, there is considerable scope to study other dimensions and measures of network size and growth—for example, the question of why some franchisors are able to successfully expand across a wide geographic area while others are limited to succeeding by remaining in focused geographic regions. This issue is particularly germane today as franchisors expand rapidly within and across countries. Finally, it is possible that the drivers of franchisee network size vary across countries—future research could investigate how actions needed to expand franchisee networks outside the United States may be different from those seen to drive franchise network size within the United States.

References

- Arellano, M., and S. R. Bond (1991). "Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations," *Review of Economic Studies* 58, 277–297.
- Arellano, M., and O. Bover (1995). "Another Look at the Instrumental Variables Estimation of Error-component Models," *Journal of Econometrics* 68, 29–51.
- Arrow, K. (1985). "The Economics of Agency," in *Principals and Agents: The Structure of Business*. Eds. J. W. Pratt and R. Zeckhauser. Boston, MA: Harvard Business Press.
- Azoulay, P., and S. Shane (2001). "Entrepreneurs, Contracts, and the Failure of Young Firms," *Management Science* 47, 337–358.
- Bercovitz, J. E. L. (2000). "An Analysis of the Contract Provisions in Business-Format Franchise Agreements," Working Paper.
- (2002). "The Option to Expand: The Use of Multi-Unit Opportunities to Support Self-Enforcing Agreements in Franchise Relationships," *Academy of Management Proceedings* 2002, Y1–Y6.
- Bergen, M., S. Dutta, and O. C. Walker, Jr. (1992). "Agency Relationships in Marketing: A Review of the Implications and Applications of Agency and Related Theories," *Journal of Marketing* 56(3), 1–24.
- Bhattacharyya, S., and F. Lafontaine (1995). "Double-Sided Moral Hazard and the Nature of Share Contracts," *The Rand Journal of Economics* 26, 761–781.
- Blair, R. D., and F. Lafontaine (2005). *The Economics of Franchising*. Cambridge: Cambridge University Press.
- Bradach, J. L. (1997). "Using the Plural Form in the Management of Restaurant Chains," *Administrative Science Quarterly* 42, 276–303.
- Brickley, J. A. (1999). "Incentive Conflicts and Contractual Restraints: Evidence from Franchising," *Journal of Law and Economics* 42, 745–774.
- (2002). "Royalty Rates and Upfront Fees in Share Contracts: Evidence from Franchising," *Journal of Law, Economics, and Organization* 18(2), 511–535.
- Brickley, J. A., and F. H. Dark (1987). "The Choice of Organizational Form: The Case of Franchising," *Journal of Financial Economics* 18, 401–420.
- Castrogiovanni, G., and R. Justis (2002). "Strategic and Contextual Influences on Firm Growth: An Empirical Study of Franchisors," *Journal of Small Business Management* 40, 98–108.
- Chun, J. (2008). "Good Time to Get a Deal on a Franchise," *Entrepreneur*, December 3.
- Combs, J. G., and D. J. Ketchen, Jr. (1999a). "Explaining Interfirm Cooperation and Performance: Toward a Reconciliation of Predictions from the Resource-Based View and Organizational Economics," *Strategic Management Journal* 20(9), 867–888.
- (1999b). "Can Capital Scarcity Help Agency Theory Explain Franchising: Revisiting the Capital Scarcity Hypothesis," *Academy of Management Journal* 42(2), 196–207.
- (2003). "Why Do Firms Use Franchising as an Entrepreneurial Strategy? A Meta-Analysis," *Journal of Management* 29, 443–465.
- Combs, J. G., S. C. Michael, and G. J. Castrogiovanni (2004). "Franchising: A

- Review and Avenues to Greater Theoretical Diversity," *Journal of Management* 30(6), 907–931.
- (2009). "Institutional Influences on the Choice of Organizational Form: The Case of Franchising," *Journal of Management* 35(5), 1268–1290.
- Combs, J. G., D. J. Ketchen, Jr., C. L. Shook, and J. C. Short (2011). "Antecedents and Consequences of Franchising: Past Accomplishments and Future Challenges," *Journal of Management* 37(1), 99–126.
- Dant, R. P., and P. D. Berger (1996). "Modeling Cooperative Advertising Decisions in Franchising," *Journal of the Operational Research Society* 47, 1120–1136.
- Dant, R. P., A. K. Paswan, and P. J. Kaufmann (1996). "What We Know About Ownership Redirection in Franchising: A Meta-Analysis," *Journal of Retailing* 72(4), 429–444.
- Dant, R. P., M. Kacker, A. T. Coughlan, and J. Emerson (2007). "A Cointegration Analysis of the Correlates of Performance in Franchised Channels of Distribution," in *Economics and Management of Networks: Franchising Networks, Cooperatives, Joint Ventures and Alliances*. Eds. G. Cliquet, G. Hendrikse, M. Tuunanen, and J. Windsperger. New York: Springer, 169–189.
- Dant, R. P., M. Grünhagen, and J. Windsperger (2011). "Franchising Research Frontiers for the Twenty-First Century," *Journal of Retailing* 87(3), 253–268.
- Dnes, A. W. (1992). "'Unfair' Contractual Practices and Hostages in Franchise Contracts," *Journal of Institutional and Theoretical Economics* 148, 484–504.
- Doney, P. M., and J. P. Cannon (1997). "An Examination of the Nature of Trust in Buyer–Seller Relationships," *Journal of Marketing* 61(April), 35–51.
- Eisenhardt, K. (1989). "Agency Theory: An Assessment and Review," *Academy of Management Review* 14(1), 57–74.
- Engle, R., and C. Granger (1987). "Cointegration and Error Correction: Representation, Estimation and Testing," *Econometrica: Journal of the Econometric Society* 55, 251–276.
- Fell, J. (2011). "Franchise Slashes Fees to Spur Jobs," *Entrepreneur*, July 11.
- Gallini, N. T., and N. A. Lutz (1992). "Dual Distribution and Royalty Fees in Franchising," *Journal of Law, Economics, and Organization* 8(3), 471–501.
- Gillis, W., and G. J. Castrogiovanni (2012). "The Franchising Business Model: An Entrepreneurial Growth Alternative," *International Entrepreneurship and Management Journal* 8(1), 75–98.
- Gillis, W., E. McEwan, T. R. Crook, and S. C. Michael (2011). "Using Tournaments to Reduce Agency Problems: The Case Of Franchising," *Entrepreneurship Theory and Practice* 35, 427–447.
- Gonzalez-Diaz, M., and V. Solis-Rodriguez (2012). "Why Do Entrepreneurs Use Franchising as a Financial Tool? An Agency Explanation," *Journal of Business Venturing* 27, 325–341.
- Grünhagen, M., and M. J. Dorsch (2003). "Does the Franchisor Provide Value to Franchisees? Past, Current and Future Value Assessments of Two Franchisee Types," *Journal of Small Business Management* 41(4), 366–384.
- Guilloux, V., C. Gauzente, M. Kalika, and N. Dubost (2004). "How France's Potential Franchisees Reach Their Decisions: A Comparison with Franchisers' Perceptions," *Journal of Small Business Management* 42(2), 218–224.
- Hamilton, J. D. (1994). *Time Series Analysis*. Princeton, NJ: Princeton University Press.
- Heckman, J. (1981). "Heterogeneity and State Dependence," in *Studies in Labor Markets*. Ed. S. Rosen. Chicago, IL: University of Chicago Press, 91–139.
- Hoffman, R. C., and J. F. Preble (2003). "Convert to Compete: Competitive Advantage Through Conversion Franchising," *Journal of Small Business Management* 41(2), 187–204.
- Justis, R. T., and R. Judd (1986). "Master Franchising: A New Look," *Journal of Small Business Management* 24, 16–21.
- Kacker, M., and R. Wu (2013). "Specific Investments in Franchisor–Franchisee Relationships: A Model," *Journal of Marketing Channels* 20, 1–2, 120–140.
- Kalnins, A. (2004). "An Empirical Analysis of Territorial Encroachment in Franchised and Company-owned Branded Chains," *Marketing Science* 23(4), 476–489.
- Kaufmann, P. J., and R. P. Dant (1996). "Multi-Unit Franchising: Growth and Management Issues," *Journal of Business Venturing* 11(5), 343–358.
- Kaufmann, P. J., and S. H. Kim (1995). "Master Franchising and System Growth Rates,"

- Journal of Marketing Channels* 4(1-2), 49-64.
- Kaufmann, P. J., and J. Stanworth (1995). "The Decision to Purchase a Franchise: A Study of Prospective Franchisees," *Journal of Small Business Management* 33, 22-33.
- Kidwell, R., A. Nygaard, and R. Silkoset (2007). "Antecedents and Effects of Free Riding in the Franchisor-Franchisee Relationship," *Journal of Business Venturing* 22, 522-544.
- Klein, B. (1980). "Transaction Cost Determinants of 'Unfair' Contractual Arrangements," *American Economic Review* 70, 356-362.
- Kling, G., A. Ghobadian, and N. O'Regan (2009). "Organic Growth and Shareholder Value: A Case Study of the Insurance Industry," *International Journal of Research in Marketing* 28(4), 276-283.
- Kosová, R., and F. Lafontaine (2010). "Survival and Growth in Retail and Service Industries: Evidence from Franchised Chain," *The Journal of Industrial Economics* LVIII(3), 542-578.
- Krueger, A. B. (1991). "Ownership, Agency, and Wages: An Examination of Franchising in the Fast Food Industry," *The Quarterly Journal of Economics* 106(1), 75-101.
- Lafontaine, F. (1992). "Agency Theory and Franchising: Some Empirical Results," *RAND Journal of Economics* 23, 263-283.
- (1993). "Contractual Arrangements as Signaling Devices: Evidence from Franchising," *Journal of Law, Economics, and Organization* 9, 256-289.
- Lafontaine, F., and K. L. Shaw (1998). "Franchising Growth and Franchisor Entry and Exit in the U.S. Market: Myth and Reality," *Journal of Business Venturing* 13(2), 95-112.
- (2005). "Targeting Managerial Control: Evidence from Franchising," *RAND Journal of Economics* 36, 131-150.
- Lafontaine, F., and M. E. Slade (1997). "Retail Contracting: Theory and Practice," *The Journal of Industrial Economics* 45(1), 1-25.
- Lal, R. (1990). "Improving Channel Coordination Through Franchising," *Marketing Science* 9, 299-318.
- Levin, A., C.-F. Lin, and C.-S. J. Chu (2002). "Unit Root Tests in Panel Data: Asymptotic and Finite-Sample Properties," *Journal of Econometrics* 108, 1-24.
- Madanoglu, M., K. Lee, and G. J. Castrogiovanni (2011). "Franchising and Firm Financial Performance Among U.S. Restaurants," *Journal of Retailing* 87(3), 406-417.
- Mathewson, G. F., and R. A. Winter (1985). "The Economics of Franchise Contracts," *Journal of Law and Economics* 28, 503-526.
- Michael, S. C. (1996). "To Franchise or Not to Franchise: An Analysis of Decision Rights and Organizational Form Shares," *Journal of Business Venturing* 11, 57-71.
- (2000). "The Effect of Organizational Form on Quality: The Case of Franchising," *Journal of Economic Behavior and Organization* 43(3), 295-318.
- (2002). "Can a Franchise Chain Coordinate?," *Journal of Business Venturing* 17(4), 325-341.
- (2003). "Determinants of Franchising Across Nations," *Management International Review* 43, 267-290.
- (2009). "Entrepreneurial Signaling to Attract Resources: The Case of Franchising," *Managerial and Decision Economics* 30(6), 405-422.
- Michael, S. C., and J. G. Combs (2008). "Entrepreneurial Failure: The Case of Franchisees," *Journal of Small Business Management* 46(1), 73-90.
- Mitsuhashi, H., S. Shane, and W. D. Sine (2008). "Organization Governance Form in Franchising: Efficient Contracting or Organizational Momentum?," *Strategic Management Journal* 29(10), 1127-1136.
- Norton, S. W. (1988). "Franchising, Brand Name Capital and the Entrepreneurial Capacity Problem," *Strategic Management Journal* 9, 105-114.
- Perrigot, R. (2004). "Le Choix Des Reseaux De Points De Vente: Une Approche Par l'Écologie des Populations et les Analyses de Survie," Doctoral thesis, University of Rennes.
- Perryman, A. A., and J. G. Combs (2012). "Who Should Own It? An Agency-Based Explanation for Multi-Outlet Ownership and Co-Location in Plural Form Franchising," *Strategic Management Journal* 33(4), 368-386.
- Peterson, A., and R. P. Dant (1990). "Perceived Advantages of the Franchise Option from the Franchisee Perspective: Empirical Insights from a Service Franchise," *Journal of Small Business Management* 28(3), 46-61.
- Price Waterhouse Coopers (2008). *Economic Impact of Franchised Businesses Vol II:*

- Results for 2005*. Washington, DC: International Franchise Association Educational Foundation.
- Rubin, P. H. (1978). "The Theory of the Firm and the Structure of the Franchise Contract," *Journal of Law and Economics* 21, 223–233.
- Sargan, J. D. (1958). "The Estimation of Economic Relationships Using Instrumental Variables," *Econometrica: Journal of the Econometric Society* 26, 393–415.
- Scott, F. A., Jr. (1995). "Franchising vs. Company Ownership as a Decision Variable of the Firm," *Review of Industrial Organization* 10(1), 69–81.
- Sen, K. C. (1993). "The Use of Initial Fees and Royalties in Business-Format Franchising," *Managerial and Decision Economics* 14(2), 175–190.
- (1998). "The Use of Franchising as a Growth Strategy by US Restaurant Franchisors," *Journal of Consumer Marketing* 15(4), 397–407.
- Shane, S. (1996). "Hybrid Organizational Arrangements and Their Implications for Firm Growth and Survival: A Study of New Franchisors," *Academy of Management Journal* 39, 216–234.
- (1998). "Making New Franchise Systems Work," *Strategic Management Journal* 19, 697–707.
- Shane, S., V. Shankar, and A. Aravindakshan (2006). "The Effects of New Franchisor Partnering Strategies on Franchise System Size," *Management Science* 52(5), 773–787.
- Spence, M. (1973). "Job Market Signaling," *Quarterly Journal of Economics* 87(3), 355–374.
- Srinivasan, R. (2006). "Dual Distribution and Intangible Firm Value: Franchising in Restaurant Chains," *Journal of Marketing* 70(July), 120–135.
- Stanworth, J. (1996). "Dispelling the Myths Surrounding Franchise Failure Rates: Some Recent Evidence from Britain," *Franchising Research: An International Journal* 1, 25–28.
- Stump, R. L., and J. B. Heide (1996). "Controlling Supplier Opportunism in Industrial Relationships," *Journal of Marketing Research* 33, 431–441.
- U.S. Department of Commerce (1987). *Franchising in the Economy 1985–1987 (prepared by Andrew KostECKA)*. Washington, DC: U.S. Department of Commerce.
- Volberda, H. W. (1996). "Toward the Flexible Firm: How to Remain Vital in Hypercompetitive Environments," *Organization Science* 7(4), 359–374.
- Wathne, K. H., and J. B. Heide (2004). "Relationship Governance in a Supply Chain Network," *Journal of Marketing* 68, 73–89.
- Wu, L. (1999). "The Pricing of a Brand Name Product: Franchising in the Motel Services Industry," *Journal of Business Venturing* 14, 87–102.

Entrepreneurial Orientation and Service Innovation on Consumer Response: A B&B Case

by Edward Shih-Tse Wang and Pei-Yi Juan

Extant studies have documented the effect of entrepreneurial orientation (EO) and innovation performance on firm-level outcomes. However, the underlying mechanisms of the specific aspects of EO (i.e., autonomy, risk-taking, and proactiveness) and innovative performance affecting consumer-level responses remain unexplored. A total of 401 dyadic sample data were collected from both bed-and-breakfast (B&B) innkeepers and corresponding consumers. We used structural equation modeling to test the research framework and hypotheses. The statistically significant paths extended from risk-taking and proactiveness to service innovation performance, then to consumer-perceived service value and consumer satisfaction, and finally to repatronage intentions. To retain consumers, B&B innkeepers must enhance service innovation performance by reshaping their risk-taking and proactiveness.

Introduction

Urban residents seek a quiet weekend; therefore, the popularity of bed-and-breakfasts (B&B) has grown over the years (Monty and Skidmore 2003). Because of the growing number of B&B inns and the increasing competition in the B&B inn industry, it is imperative for B&B inn marketers to focus on attracting and retaining consumers. In the modern consumer-centered era, delivering superior consumer value plays a key role in building and sustaining a competitive advantage (Wang et al. 2004). Consumer value has therefore become an ongoing concern in attracting and retaining consumers (Soltani and Gharbi 2008). Based on the service and consumer behavior literature, creating consumer-perceived value results in numerous advantages, including service satisfaction

(Butcher, Sparks, and O'Callaghan 2001; Chiou 2004; Hu, Kandampully, and Juwaheer 2009; Moliner 2009; Roig, García, and Tena 2009; Wu 2011), consumer loyalty (Chiou 2004; Roig, García, and Tena 2009), and repatronage intentions (Hu, Kandampully, and Juwaheer 2009). Thus, an understanding of consumer perceptions of value is fundamental to the competitive nature of all industries (Sparks, Bradley, and Jennings 2011).

Organizational researchers believe that entrepreneurial orientation (EO) has a strong and direct effect on competitive advantage (Kraus et al. 2012) and enterprise business performance (Audretsch, Bönte, and Keilbach 2008; Ha-Brookshire 2009; Krauss et al. 2005). Rauch et al. (2009) argued that EO is lucrative in high-tech industries because of the dynamism and rapid changes in these industries.

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A previous study suggested that EO provides a foundation for the long-term competitive success of firms competing in various industries across different environments (Jogarathnam and Tse 2006). Therefore, several organizational researchers have considered the effect of EO on innovative capability (Lee and Hsieh 2010; O’Cass and Weerawardena 2009; Renko, Carsrud, and Brännback 2009; Salavou and Lioukas 2003). Malewicki and Sivakumar (2004) suggested that innovation management is a crucial activity for organizational growth and survival.

Although the service industry has become a crucial industry sector, no empirical research has concentrated on the role of EO in the service industry (Kraus 2013), and a paucity of empirical documentation exists regarding the effect of EO on service business performance (Lee and Lim 2009). Empirical work related to services is relatively scarce in innovation research (Tajeddini 2010), and this neglect is a common feature of innovation research (Tejada and Moreno 2013). Whereas the service innovation process is less tangible than product (Den Hertog, Van der Aa, and de Jong 2010), creating superior customer value requires a constant focus on customer needs and competitor capabilities (Keh, Nguyen, and Ng 2007). Scholars have recently focused on certain research topics concerning this issue. For example, empirical consumer studies have identified the effect of perceived innovativeness on consumer-perceived performance (La, Patterson, and Styles 2009) and perceived value (Falkenreck and Wagner 2011; Kumar and Grisaffe 2004).

Although researchers have emphasized the need to investigate the effect of EO and innovation on firm-level outcomes (Omar and Jusoh 2010), the effect of EO and service-innovative performance on consumer-level responses is unclear. Based on our review of relevant literature, only one recent study has investigated EO as a predictor of consumer-perceived value using manager self-reported data (Nasution et al. 2011). The study showed EO to be the significant driver of innovation and consumer value. The weakness of the study is that EO was divided into three sub-dimensions (i.e., autonomy, risk-taking, and proactiveness), but EO was examined as a single variable, leaving it unclear as to which specific EO activities are associated with service innovation and affect consumer-level responses. The effects of risk-taking, autonomy and proactiveness on service

innovation performance remain unclear. Moreover, data collected only from the manager perspective that examine the effect of EO on consumer-perceived value are questionable. Because of the possible difference between consumer and manager perceptions of product and service values (Pandza and Vignali 2010) and methodological problems, such as common method variance (CMV), the use of such data may lead to overestimation of the considered associations. Empirical evidence supporting the relationships between EO and consumer-perceived value is therefore lacking based on both manager and consumer data.

To overcome the biases (such as CMV) inherent in single-source data, dyadic data is a broadly accepted solution (Evanschitzky, Sharma, and Prykop 2012). However, the dyadic research approach is rare because of the difficulties inherent in the collection process (Plewa 2009). We therefore extended the research framework of Nasution et al. (2011) and focus on three types of EO (i.e., autonomy, risk-taking, and proactiveness) that underpin service innovation performance and consumer-level outcomes using dyadic data. We address multiple research questions and present the following two contributions to the marketing and service literature. First, although the tourism industry has been a fruitful field for entrepreneurial business, additional theoretical work is necessary to develop a framework of the EO domain of tourism research (Li 2008). To clarify the specific effects of EO (autonomy, risk-taking, and proactiveness) on innovative performance and consumer-level outcomes, we conceptually and empirically link the three types of EO (autonomy, risk-taking, and proactiveness), service innovation, consumer-perceived value, service satisfaction, and repatronage intentions in the context of B&B inns. Second, we use dyadic data, which is an improved test of the relationships between constructs, because it avoids CMV (Evanschitzky, Sharma, and Prykop 2012). Our research was conducted based on dyadic data incorporating both B&B innkeepers and the corresponding consumer as the unit of analysis to examine the research framework.

Literature Review and Hypotheses Development

The B&B inn is a highly local and individual product (Lanier and Berman 1993) that combines and transforms the advantageous

resources of local culture, ecology, and scenery into leisure facilities with unique style and attraction (Wu and Yang 2010). A B&B inn ranges in size from two to 20 rooms to provide a transient lodging service (Lanier and Berman 1993). Most B&B businesses are small, family-run, inn-lodging industries (Warnick and Klar 1991) that predominantly employ members of the host society (Huang 2008). Similar to all small businesses, many B&B inns are owner operated (Hsieh 2010) or frequently supplement their own labor with a hired staff (Lanier and Berman 1993). Thus, B&Bs appeal to tourists because the properties are personal and small in nature (Nuntsu, Tassiopoulos, and Haydam 2004). A recent study examined the importance of EO because it contributes to firm performance and because family-owned businesses have more success when they adopt an entrepreneurial posture (Campbell et al. 2010). The continuously changing market for B&B inn, consumers requires innovative activities (Lanier and Johnson 1996). A previous study has suggested that leisure travelers are influenced by innovative amenities (Victorino et al. 2005) and that innkeepers should be innovative regarding consumer needs (Lanier and Johnson 1996) by providing services such as Internet access, childcare facilities, and pet policies (Victorino et al. 2005).

Previous research has suggested that EO is associated with examining new opportunity potential (Robson, Haugh, and Obeng 2009) and exploiting new products or services (McFadzean, O'Loughlin, and Shaw 2005). Thus, EO is the ability to identify new opportunities and seize market opportunities (Maritz and Salaran 2008; Mirza and Ali 2011). Innovation encompasses ideas, practice, or any object perceived as a novelty (Mirza and Ali 2011). Researchers have used different terms for EO, including entrepreneurship, entrepreneurial strategic posture, and entrepreneurial proclivity, to reinforce the competitive advantages of enterprises and to enhance business performance (Lee and Hsieh 2010). However, previous studies have distinguished between the concepts of "entrepreneurial orientation" and "entrepreneurship," and suggested that entrepreneurship refers to the content of entrepreneurial decisions (what is undertaken), whereas EO refers to key entrepreneurial processes (how new ventures are undertaken) (Lumpkin and Dess 1996). Lumpkin and Dess further identified five EO dimensions, including autonomy, risk-

taking, proactiveness, competitive aggressiveness, and innovativeness. Nasution et al. (2011) suggested that EO includes three constructs: risk-taking, autonomy, and proactiveness, and showed that EO is a significant driver of innovation and consumer value. Thus, instead of treating innovativeness as one construct of EO, Nasution et al. suggested that EO influences innovativeness. Because current research has extended the previous work of Nasution et al. (2011), we adopt the three constructs of EO in this study.

The Effect of Types of EO on Service Innovation

Service innovation refers to the successful development of a new service, including undertaking innovative activities on any scale to improve and modify services with characteristics that make them differ from existing services (Esmailzadeh 2011). Autonomy refers to the extent of self-management, self-direction, or empowerment with which a person or group of people initiate performing a task (D'Intino et al. 2007) or the decisional freedom to determine which actions are required and how to best execute them (Janz et al. 1997). In this study, autonomy refers to employees performing a job with minimal supervision. Autonomy represents the actions of a person pertaining to an inner endorsement of their own actions (van Gelderen 2010). Researchers have suggested that greater autonomy allows for innovative problem solving (Rita 2001), and increased employee autonomy often results from innovative efforts (Janz et al. 1997) and is conducive to product innovation (Chandy and Tellis 1998). Thus, when innkeepers empower their employees and encourage them to self-manage, the employees are more likely to engage in service innovation. We thus propose the following hypothesis:

H1: Autonomous activities have a significant positive effect on service innovation.

A previous study suggested that complexity and uncertainty are inherent in innovation (Ruiz-Moreno and Llorens-Montes 2008). Because of the inherent risk associated with product or service innovation, enterprises may lack the motivation to innovate (Li, Liu, and Ren 2007). Risk-taking is the willingness of management to commit significant resources to opportunities in the face of uncertainty (Chang

2000), and a manager who take risks may feel less threatened when risking resources on new opportunities. Research has suggested that firms favorable to innovation are likely to take risks (Zhang and Duan 2010). Thus, a high level of risk-taking activity is expected to result in higher innovation. We thus propose the following hypothesis:

H2: Risk-taking activities have a significant positive effect on service innovation.

Proactiveness refers to the propensity of a firm to demonstrate a forward-looking perspective, which involves introducing new products or services ahead of the competition, and an opportunity-seeking perspective, which involves acting in anticipation of future demand and opportunity to shape the environment and create change (Sebora and Theerapatvong 2010). Proactiveness also relates to the propensity of a firm to understand the business activities of their competition (Chang 2000). Seyed (2012) indicated that proactiveness is central to innovative behavior and motivates firms in developing innovative techniques and processes to lead the market in developing new products or services. Thus, we propose the following hypothesis:

H3: Proactive activities have a significant positive effect on service innovation.

Effect of Service Innovation on Consumer-Perceived Service Value

A previous study has suggested that competitiveness is based on offering new products and services that are superior to competitors (Trejo, Gutiérrez, and Jasso 2011). Nasution et al. (2011) emphasized that product innovation entails introducing new products or services to meet consumer and market needs. Lindic and Marques (2011) suggested that firm managers focus on innovation based on consumer-perceived value. Innovation orientation is therefore a key driver of consumer-centric value (Ngo and O'Cass 2011). Firms attempt to produce new products that are more attractive than existing products (Verhees and Meulenber 2004), and service firms replace existing services by providing new services to enhance the perceived value of their products or services (Ottenbacher and Harrington 2010). La et al. (2009) indicated that innovation enhances value for target consumers in the

context of services. Kumar and Grisaffe (2004) argued that innovativeness leads to favorable evaluations of product and service values. We therefore propose the following hypothesis:

H4: Service innovation has a significant positive effect on consumer-perceived service value.

The Effect of Consumer-Perceived Service Value on Consumer Satisfaction

Prior research has identified perceived service value as the trade-off between benefit (utility) and sacrifice (price) (Gera 2011), and overall service is based on the perceptions of what is received and what is given (Hume and Gillian 2010). Consumer satisfaction refers to consumer judgment of the fulfilled state (Hsin and Wang 2011) by which a consumer compares the expected reward and the actual purchase cost (Bei and Chiao 2001). Previous researchers have suggested that perceived service value is an antecedent of consumer satisfaction (Hsin and Wang 2011; Hume and Gillian 2010; Lim, Widdows, and Park 2006). Thus, we propose the following hypothesis:

H5: Consumer-perceived service value has a significant positive effect on consumer satisfaction.

Effect of Consumer-Perceived Service Value on Consumer-Repatriation Intention

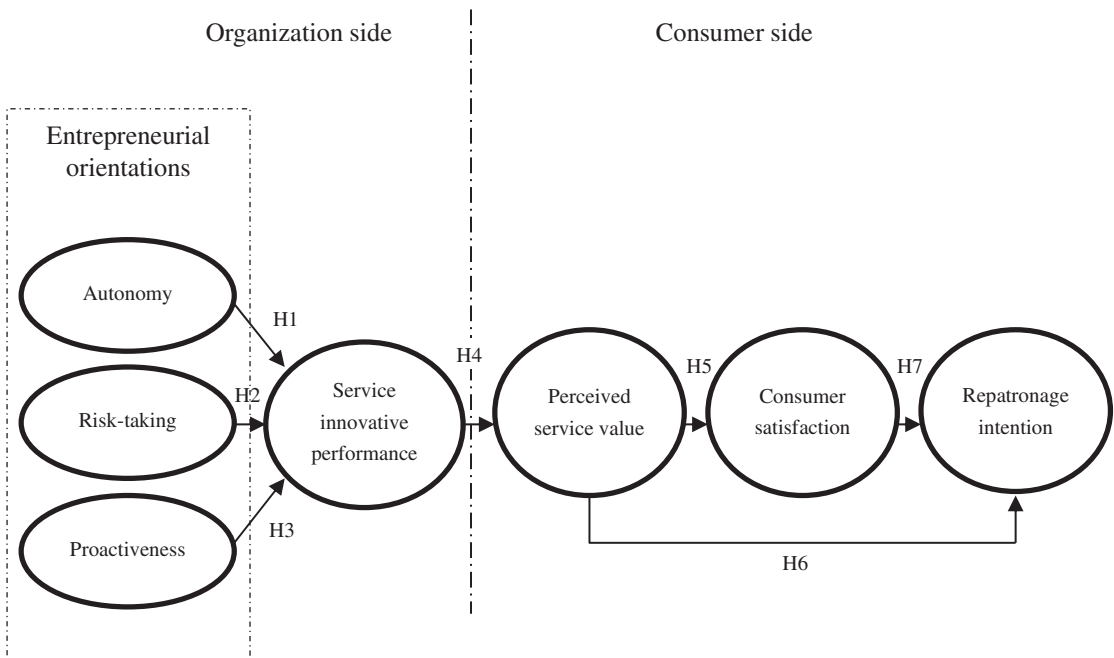
Perceived service value contributes to approach behavior by reducing a person's need to seek alternative service providers (Hsin and Wang 2011). Repatriation intention refers to the likelihood or probability of regarding future patronage (Wakefield and Blodgett 1999). Researchers have suggested that the construct of perceived value is the most important indicator of purchase behavior (Hsin and Wang 2011) and repurchase intention (James and Sheila 2002).

H6: Consumer-perceived product value has a significant positive effect on consumer-repatriation intention.

Effect of Consumer Satisfaction on Consumer Repatriation Intention

Consumer satisfaction toward service is conceptualized as an attitude-like judgment based on one or a series of service interactions

Figure 1
Research Model and Related Hypotheses



between service providers and consumers (Christopher 2007). Consumer satisfaction on service interactions therefore affects repatronage intention of the service provider. Among the factors influencing consumer-behavioral intention, consumer satisfaction has often been used to predict repurchase intentions in the tourism field (James and Sheila 2002).

H7: Consumer satisfaction has a significant positive effect on consumer-repatronage intention.

The framework in Figure 1 shows all of the previous hypotheses.

Research Methodology

Data Collection and Sampling

This study selected the inn industry in Taiwan as the research subject because inn owners in Taiwan face competition from new B&B entrants. In 2000, the two-day weekend was implemented in Taiwan and has made Taiwanese people increasingly involved in leisure activities. The two-day weekend has therefore provided opportunities to attract growing

numbers of B&B inn establishments in Taiwan. B&B operations have quickly become popular, and more money has been invested in B&B inns (Wu and Yang 2010). Our research conducted from November 2012 to March 2013 adopted convenience sampling. To test the hypotheses, two groups (B&B innkeepers and their consumers) were studied using two different self-completed questionnaires. The questionnaire for the B&B innkeeper assessed EO and service innovation, and the questionnaire for consumers evaluated consumer-perceived service value, consumer satisfaction, and repatronage intentions. Data were also collected on the age, sex, and education level of the two groups.

The dyadic data incorporating both the B&B innkeepers and the corresponding consumers were collected in two phases. First, a trained researcher who administered the field surveys invited qualified B&B innkeepers to participate in this study, stressing the research objectives and the value of their cooperation. We invited 478 B&B innkeepers to participate in a survey questionnaire and obtained a response rate of 87. We administered a two-page survey

questionnaire to the B&B innkeepers who accepted the invitation regarding their EO and the service innovation of their B&B inn. During the second phase, after receiving the completed questionnaire from a B&B innkeeper, the consumer of the inn was invited to participate in the survey, ensuring that the data were collected for matched relationship pairs. To control for social desirability bias, we asked consumers who had checked out of the inn to participate in the study for data collection by using convenience sampling. The research team did not collect the names of consumers and assured them that their answers were anonymous. Consumers who accepted the invitation were given a one-page survey questionnaire regarding the perceived service value of the B&B inn and were asked to assess their satisfaction and repatronage intentions regarding the B&B inn. We also added a filter question to exclude consumers who were relatives or had participated in the B&B inn operation. Approximately 588 consumers were invited to participate in the study, of whom 423 consumers were available and agreed to participate, yielding a response rate of 72 percent.

After excluding incomplete responses, the final usable sample comprised 802 responses (401 dyads). To form a dyad for subsequent statistical analysis, we combined a sample B&B innkeeper with consumer data. This formed a matched dyad, including one B&B innkeeper and one of his or her consumers; thus, the unit of analysis was the paired sample of a B&B innkeeper and his or her consumers. Although we did not include nonparticipants in this study, nonresponse bias was a possibility. To evaluate nonresponse bias, we tested for statistically significant differences between early and late respondents for any measure items of the two questionnaires. A *t*-test showed no significant differences, indicating that nonresponse bias was not a problem.

Construct Measurement

We measured all constructs using multi-item scales that were validated in previous studies. For the B&B innkeepers, we adopted the EO and service innovation measures in the framework from the original 13-item scale (including the three-item scale for autonomy, the five-item scale for risk-taking, and the five-item scale for proactive activities) and the five-item product innovation scale from Nasution et al. (2011). On the consumer side, perceived service value

constructs were measured by three-item scales developed by Mechinda, Serirat, and Gulid (2009), whereas consumer satisfaction was measured by a three-item scale (Flint, Blocker, and Boutin 2011). Lastly, repatronage intention was measured by a four-item scale adapted from Gracea and Cassb (2005). A seven-point Likert scale was employed for all measures.

Participant Demographics

Survey participants of B&B innkeepers 219 were women (54.6 percent) and 182 were men (45.4 percent). Most B&B innkeepers were between 30 and 49 years of age (54 percent). Among these innkeepers, 50 percent had a university degree. On average, innkeepers who participated in the survey had over six years' management experience in the B&B inn industry and ran their own five-employee business. On the other hand, most (71 percent) consumers of B&B inns who participated in the survey were first-time visitors, followed by second-time visitors (17 percent). Of the survey-participants, 204 consumers were women (50.9 percent) and 197 were men (49.1 percent). Most consumers were between 20 and 39 years of age (76 percent) and 83 percent had a university degree.

Data Analysis and Results

Measurement Accuracy Analysis

We conducted confirmatory factor analysis (CFA) using the input matrices from the samples and LISREL 8.7 (Scientific Software International, Inc. Lincolnwood, IL, USA) to examine the reliability and discriminate validity of the constructs. We developed a survey consisting of 28 items. The initial results of CFA demonstrated a satisfactory model fit ($\chi^2/df = 1,083.54/329 = 3.29$; CFI = 0.96; NNFI = 0.96; RMSEA = 0.081). (*df* = degrees of freedom; CFI = comparative fit index; NNFI = non-normed fit index; RMSEA = root mean square error of approximation.) We improved the measurement model by deleting three items (two items from risk taking; one item from proactive activities) based on modification indices. The deleted items were "Management accepts that certain suggestions may fail when implemented," and "Our organization emphasizes opportunity for success rather than chances for failure" (risk-taking) and "We are usually the first to introduce new services in the industry" (proactive activities). The final model obtained a good fit ($\chi^2/df = 750.19/254 = 2.95$; CFI = 0.97; NNFI = 0.97; RMSEA = 0.070).

Table 1
Basic Statistics of Research Constructs

Research Constructs	Mean	Standard Deviation	CR	Correlation and the Square Root of AVE							
				Aut	RT	Pact	SI	PSV	CS	PI	
Autonomy (Aut)	6.51	0.55	0.75	0.71							
Risk-Taking (RT)	5.99	0.80	0.65	0.43	0.62						
Proactiveness (Pact)	6.17	0.64	0.82	0.44	0.46	0.74					
Service Innovative (SI)	5.62	0.89	0.88	0.28	0.42	0.66	0.78				
Perceived Service Value (PSV)	5.01	1.27	0.94	0.06	0.08	0.10	0.16	0.92			
Consumer Satisfaction (CS)	5.22	1.17	0.96	0.04	0.01	0.06	0.16	0.83	0.94		
Repatronage Intention (PI)	4.82	1.42	0.96	0.00	0.03	0.06	0.15	0.83	0.84	0.87	

Note: The square root of average variance extracted (AVE) for each construct (on the diagonal). CR = composite reliability. Scores: 1, *strongly disagree*; 4, *neutral*; 7, *strongly agree*.

Therefore, these items were not included in the subsequent analysis.

The means, standard deviations, composite reliability (CR), correlation among the survey items, and the square root of average variance extracted (AVE) of the research constructs are reported in Table 1. As indicated in Table 1, composite reliabilities ranged from 0.65 to 0.96, exceeding the threshold of 0.6 suggested by Bagozzi and Yi (1988), indicating all constructs met these reliability criteria. Discriminate validity was then tested by examining whether the square root of AVE for each construct was greater than the correlations between each of the constructs. As shown in Table 1, all indicators fell within the accepted ranges. Thus, the results confidently conclude that all constructs capture distinct components.

Model Fit Assessment

The research framework in Figure 1 shows the structural model tested using SEM. The χ^2 ratio = 772.14 over $df = 265$ of 2.91 falls in the range between 1.0 and 3.0 (Chen 2008), indicating a good model fit. The RMSEA value of 0.069 below the cutoff level of 0.08 recommended by Kelly (2007) also indicates a good fit. The goodness of fit index (GFI) at 0.87 exceeds the threshold values of 0.8 recom-

mended in the literature (Hollet-Haubert, Mulki, and Fournier 2011). Normed fit index (NFI) at 0.97, non-normed fit index (NNFI) at 0.97, parsimony normed fit index (PNFI) at 0.84, comparative fit index (CFI) at 0.97, incremental fit index (IFI) at 0.97, and relative fit index (RFI) at 0.95 exceed the recommended cutoff level of 0.9 (Tsaur and Wang 2011). The structural model results indicate that the model fits the data well and can be used to test hypotheses.

Path Analysis

Table 2 shows that risk-taking (H2) and proactiveness (H3) are significant predictors of service innovative performance, whereas autonomy (H1) is nonsignificant. Consequently, service innovation leads to consumer-perceived service value (H4). Perceived service value is positively related to consumer satisfaction (H5) and repatronage intentions (H6). Finally, consumer satisfaction has a strong positive relationship with repatronage intentions (H7).

Alternative Models Testing

The hypothesized model is a complete mediation model in which EO (i.e., autonomy, risk-taking, and proactiveness) affects consumer-level outcomes (perceived service value) only

Table 2
Testing the Proposed Hypotheses

	Path between	Path Coefficients	t-Values
H1	Autonomy → Service-innovative performance	-0.16 ^{ns}	-1.92
H2	Risk-taking → Service-innovative performance	+0.38***	4.35
H3	Proactiveness → Service-innovative performance	+0.50***	7.45
H4	Service-innovative performance → Perceived service value	+0.17**	3.19
H5	Perceived service value → Consumer satisfaction	+0.87***	21.95
H6	Perceived service value → Repatronage Intention	+0.44***	7.39
H7	Consumer satisfaction → Repatronage Intention	+0.50***	8.49

** $p < .01$

*** $p < .001$

ns, nonsignificant.

indirectly through service innovation. Based on the suggestion by Nasution et al. (2011) that EO directly results in increased consumer-perceived value, we further tested two alternative models for the proposed model: (1) in the direct model, the three types of EO and service innovation directly affect consumer-perceived service value. The results show that the effects of the three types of EO on consumer-perceived service value are all nonsignificant. (2) In the partial mediation model, EO directly and indirectly affects (through service innovation) consumer-level outcomes. Again, the effects of the three types of EO on consumer-perceived service value are all nonsignificant. We also used the consistent Akaike information criterion (CAIC) for model comparison and smaller values of these criteria indicate a better fit of the model (Hennig-Thurau et al. 2002). For the hypothesized model (complete mediation model), the CAIC is 1,191.77; the values for the direct model and the partial mediation model are CAIC = 1,205.82, indicating that the hypothesized model is superior to the direct and partial mediation models.

Discussion

Whereas extant research has documented the role of EO in affecting firm-level outcomes, the underlying mechanisms of specific EO activities that effect consumer-level responses remain unexplored. Based on the results of SEM analyses, risk taking and proactive activities of B&B inns influence service innovation, but autonomous activities do not influence service

innovation; thus, the types of EO activities exhibit different effects. We also found that service innovation affects consumer-perceived service value. Consequently, consumer-perceived service value directly and indirectly (through consumer satisfaction) led to repatronage intentions. Our study provides evidence that risk-taking and proactiveness affect consumer response to service value through service-innovative performance, which has a highly significant effect on satisfaction and, ultimately, repatronage intentions.

Consistent with the results of previous studies, we maintain that risk taking (Zhang and Duan 2010) and proactive activities (Seyed 2012) influence innovation performance. However, our study results are inconsistent with those of prior studies that have linked autonomous activities to enhanced innovation performance (Chandy and Tellis 1998; Janz et al. 1997). This may be because autonomy activities may not always produce higher innovative performance because of culture differences. Western culture might place a greater value on personal autonomy, whereas Asian culture may place greater value on group autonomy. One study showed that Asian American children displayed higher levels of performance in contexts emphasizing choices determined for them by valued in-group members, whereas Anglo American children displayed higher levels of performance in contexts offering personal choice (Iyengar and Lepper 1999). This variance in the value of autonomy across cultures may explain why the

autonomous activities of B&B inns in Taiwan are unlikely to result in service innovation.

Theoretical and Practical Implications

Based on our review of relevant literature, no previous study has provided empirical evidence on the link between specific types of EO (i.e., autonomy, risk-taking, and proactiveness), service innovation, and consumer-level responses. Previous study examining the effect of EO has relied on data collected from business owners or manager self-report questionnaires, and their findings show that EO directly and indirectly influences innovation and consumer value (Nasution et al. 2011). In contrast, we developed a conceptual model and used both B&B innkeeper and consumer data to link three types of EO, service innovation, consumer-perceived service value, consumer satisfaction, and consumer repatronage intentions. Based on the dyadic sample data, we found that EO risk-taking and proactive activities play a crucial role in directly enhancing service innovation. Based on alternative model testing, the results show that service innovations are a significant intermediate outcome of EO that enhance consumer-perceived service value. Therefore, we suggest that the effects of service innovation completely mediate the EO–consumer-perceived value relationship. More specifically, greater risk-taking and proactive activities result in higher consumer-perceived service value depending on whether these activities increase service innovation. We also found the significant influence of consumer-perceived value on service satisfaction and repatronage intentions. We contribute to the literature by determining the effect of EO on consumer response using dyadic sample data and bridging the gap between EO and consumer studies.

Our research results have two practical implications for B&B innkeepers. First, we demonstrate a positive and significant relationship between specific types of EO and the service innovation of B&B innkeepers. B&B innkeepers who take risks and engage in proactive activities enhance service innovation and may apply this concept as an effective management tool to enhance innovation performance. Therefore, B&B innkeepers may consider enhancing their EO activities through entrepreneurship training programs to enhance and reshape their EO activities by considering uncertainty as a challenge, viewing new venture failure as a learning

experience, and encouraging employees to venture into unexplored territories. B&B innkeepers should also constantly seek new opportunities related to current operations to improve business performance and determine methods of staying ahead of competitors in responding to market challenges.

Our results also show that service innovations significantly predict consumer-perceived service value, which in turn results in consumer satisfaction and repatronage intentions. B&B innkeepers may apply this concept to monitor their service innovation performance to determine whether they should modify existing services or offer additional services and whether these new services have caused substantial industry changes that improve consumer perceptions of service value, which is an important antecedent of consumer satisfaction and repatronage intentions.

Limitations and Future Research

This study has limitations and provides numerous opportunities for extension. First, we focused on the effects of EO and service innovation on consumer-level responses and developed a conceptual model to clarify these effects. Future research might address alternative conceptualizations of the relationships between the variables specified in the model. First, because of the pronounced effects of a business approach or philosophy, such as human resource management (Nasution et al. 2011), on innovation, future studies could further examine the effect of human resource practices on consumer responses by using dyadic data. Second, Lau et al. (2010) suggested that organizational variables, such as flexibility and control, are significantly related to innovation. Therefore, our study could be replicated and extended to include the effect of organizational variables. Third, study has indicated the benefit of accessing social networks to enhance the relationship between EO and innovativeness (Maritz 2010). Therefore, further research could incorporate the moderating effect of social networks and interactions into the EO-repatronage intentions model. Finally, one other limitation of this study stems from its research conducted on Taiwan B&B inns, which limits generalizability. Researchers have suggested that culture value affects entrepreneurship (Urban 2006) and service evaluation (Jaramillo and Marshall 2004). Future studies should therefore test the

generalizability of the results reported with other countries belonging to different cultures.

Whereas the competition within the B&B inn industry continues to increase, enhancing service value, consumer satisfaction, and ultimately consumer retention remain critical issues for B&B innkeepers. To ensure consumer retention, more research is needed to provide greater insight into whether and how B&B innkeepers and business characteristics affect consumer response. An enhanced understanding of B&B innkeepers and business characteristics on consumer patronage intentions could help B&B innkeepers build a more successful approach for consumer retention.

References

- Audretsch, D. B., W. Bönte, and M. Keilbach (2008). "Entrepreneurship Capital and Its Impact on Knowledge Diffusion and Economic Performance," *Journal of Business Venturing* 23(6), 687–698.
- Bagozzi, R. P., and Y. Yi (1988). "On the Evaluation of Structural Equation Models," *Journal of the Academy of Marketing Science* 16(1), 74–94.
- Bei, L.-T., and Y.-C. Chiao (2001). "An Integrated Model for the Effects of Perceived Product, Perceived Service Quality, and Perceived Price Fairness on Consumer Satisfaction and Loyalty," *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior* 14, 125–140.
- Butcher, K., B. Sparks, and F. O'Callaghan (2001). "Evaluative and Relational Influences on Service Loyalty," *Journal of Service Management* 12(3/4), 310–327.
- Campbell, J. M., N. Line, R. C. Runyan, and J. L. Swinney (2010). "The Moderating Effect of Family-Ownership on Firm Performance: An Examination of Entrepreneurial Orientation and Social Capital," *Journal of Small Business Strategy* 21(2), 27–45.
- Chandy, R. K., and G. J. Tellis (1998). "Organizing for Radical Product Innovation: The Overlooked Role of Willingness to Cannibalize," *Journal of Marketing Research* 35(4), 474–487.
- Chang, J. (2000). "Model of Corporate Entrepreneurship: Intrapreneurship and Exopreneurship," *International Journal of Entrepreneurship* 4, 69–104.
- Chen, C. (2008). "Causal Modeling of Knowledge-Based Economy," *Management Decision* 46(3), 501–514.
- Chiou, J.-S. (2004). "The Antecedents of Consumers' Loyalty Toward Internet Service Providers," *Information and Management* 41(6), 685–695.
- Christopher, L. C. (2007). "The FAIRSERV Model: Consumer Reactions to Services Based on a Multidimensional Evaluation of Service Fairness," *Decision Sciences* 38(1), 107–130.
- Den Hertog, P., W. Van der Aa, and M. W. de Jong (2010). "Capabilities for Managing Service Innovation: Towards a Conceptual Framework," *Journal of Service Management* 21(4), 490–514.
- D'Intino, R. S., M. G. Goldsby, J. D. Houghton, and C. P. Neck (2007). "Self-Leadership: A Process for Entrepreneurial Success," *Journal of Leadership and Organizational Studies* 13(4), 105–120.
- Esmailzadeh, P. (2011). "How to Manage and Flourish Innovation in Hospitals' Clinical IT?," *Academy of Health Care Management Journal* 7(2), 69–88.
- Evanschitzky, H., A. Sharma, and C. Prykop (2012). "The Role of the Sales Employee in Securing Customer Satisfaction," *European Journal of Marketing* 46(3), 489–508.
- Falkenreck, C., and R. Wagner (2011). "The Impact of Perceived Innovativeness on Maintaining a Buyer-Seller Relationship in Health Care Markets: A Cross-Cultural Study," *Journal of Marketing Management* 27(3/4), 225–242.
- Flint, D. J., C. P. Blocker, and P. J. Boutin (2011). "Customer Value Anticipation, Customer Satisfaction and Loyalty: An Empirical Examination," *Industrial Marketing Management* 40, 219–230.
- Gera, R. (2011). "Modelling E-Service Quality and Its Consequences in India: An SEM Approach," *Journal of Research in Interactive Marketing* 5(2), 203–225.
- Gracea, D., and A. O. Cassb (2005). "An Examination of the Antecedents of Repatronage Intentions across Different Retail Store Formats," *Journal of Retailing and Consumer Services* 12(4), 227–243.
- Ha-Brookshire, J. E. (2009). "Does the Firm Size Matter on Firm Entrepreneurship and Performance? US Apparel Import Intermediary Case?," *Journal of Small Business and Enterprise Development* 16(1), 131–146.
- Hennig-Thurau, T., K. P. Gwinner, and D. D. Gremler (2002). "Understanding Relationship Marketing Outcomes: An Integration of

- Relational Benefits and Relationship Quality," *Journal of Service Research* 4(3), 230–247.
- Hollet-Haudebert, S., J. P. Mulki, and C. Fournier (2011). "Neglected Burnout Dimensions: Effect of Depersonalization and Personal Nonaccomplishment on Organizational Commitment of Salespeople," *Journal of Personal Selling and Sales Management* 31(4), 411–428.
- Hsieh, Y.-C. (2010). "Bed-and-Breakfast Innkeepers in the United States: When the Boundary between Work and Personal Life Is Blurred," *Journal of Human Resources in Hospitality and Tourism* 9(2), 200–217.
- Hsin, H. C., and H.-W. Wang (2011). "The Moderating Effect of Customer Perceived Value on Online Shopping Behaviour," *Online Information Review* 35(3), 333–359.
- Hu, H.-H., J. Kandampully, and T. D. Juwaheer (2009). "Relationships and Impacts of Service Quality, Perceived Value, Customer Satisfaction, and Image: An Empirical Study," *The Service Industries Journal* 29(2), 111–125.
- Huang, L. (2008). "Bed and Breakfast Industry Adopting E-Commerce Strategies in E-Service," *The Service Industries Journal* 28(5), 633–648.
- Hume, M., and S. M. Gillian (2010). "The Consequence of Appraisal Emotion, Service Quality, Perceived Value and Customer Satisfaction on Repurchase Intent in the Performing Arts," *The Journal of Services Marketing* 24(2), 170–182.
- Iyengar, S. S., and M. R. Lepper (1999). "Rethinking the Value of Choice: A Cultural Perspective on Intrinsic Motivation," *Journal of Personality and Social Psychology* 76(3), 349–366.
- James, F. P., and J. B. Sheila (2002). "An Examination of the Construct of Perceived Value for the Prediction of Golf Travelers' Intentions to Revisit," *Journal of Travel Research* 41(1), 38–45.
- Janz, B. D., J. C. Wehterbe, G. B. Davis, and R. A. Noe (1997). "Reengineering the Systems Development Process: The Link between Autonomous Teams and Business Process Outcomes," *Journal of Management Information Systems* 14(1), 41–68.
- Jaramillo, F., and G. W. Marshall (2004). "Critical Success Factors in the Personal Selling Process: An Empirical Investigation of Ecuadorian Salespeople in the Banking Industry," *The International Journal of Bank Marketing* 22(1), 9–25.
- Jogaratham, G., and E. C. Tse (2006). "Entrepreneurial Orientation and the Structuring of Organizations," *International Journal of Contemporary Hospitality Management* 18(6), 454–468.
- Keh, H. T., T. T. M. Nguyen, and H. P. Ng (2007). "The Effects of Entrepreneurial Orientation and Marketing Information on the Performance of SMEs," *Journal of Business Venturing* 22(4), 592–611.
- Kelly, S. (2007). "The Function and Character of Relationship Benefits," *Journal of Small Business and Enterprise Development* 14(4), 602–619.
- Kraus, S. (2013). "The Role of Entrepreneurial Orientation in Service Firms: Empirical Evidence from Austria," *The Service Industries Journal* 33(5), 427–444.
- Kraus, S., J. P. C. Rigtering, M. Hughes, and V. Hosman (2012). "Entrepreneurial Orientation and the Business Performance of SMEs: A Quantitative Study from the Netherlands," *Review of Managerial Science* 6(2), 161–182.
- Krauss, S. I., M. Frese, C. Friedrich, and J. M. Unger (2005). "Entrepreneurial Orientation: A Psychological Model of Success among Southern African Small Business Owners," *European Journal of Work and Organizational Psychology* 14(3), 315–344.
- Kumar, A., and D. B. Grisaffe (2004). "Effects of Extrinsic Attributes on Perceived Quality, Customer Value, and Behavioral Intentions in B2B Settings: A Comparison across Goods and Service Industries," *Journal of Business to Business Marketing* 11(4), 43–74.
- La, V., P. Patterson, and C. Styles (2009). "Client-Perceived Performance and Value in Professional B2B Services: An International Perspective," *Journal of International Business Studies* 40(2), 274–300.
- Lanier, P., and J. Berman (1993). "Bed-and-Breakfast Inns Come of Age," *Cornell Hospitality Quarterly* 34(2), 15–23.
- Lanier, P., and J. Johnson (1996). "The Importance of F&B in Small Inns," *Cornell Hotel and Restaurant Administration Quarterly* 37(4), 43–49.
- Lau, T., K. F. Chan, S. H. C. Tai, and D. K. C. Ng (2010). "Corporate Entrepreneurship of IJVs in China: MRN," *Management Research Review* 33(1), 6–22.

- Lee, J.-S., and C.-J. Hsieh (2010). "A Research in Relating Entrepreneurship, Marketing Capability, Innovative Capability and Sustained Competitive Advantage," *Journal of Business and Economics Research* 8(9), 109–119.
- Lee, S. M., and S. Lim (2009). "Entrepreneurial Orientation and the Performance of Service Business," *Service Business* 3(1), 1–13.
- Li, L. (2008). "A Review of Entrepreneurship Research Published in the Hospitality and Tourism Management Journals," *Tourism Management* 29(5), 1013–1022.
- Li, Y., Y. Liu, and F. Ren (2007). "Product Innovation and Process Innovation in SOEs: Evidence from the Chinese Transition," *Journal of Technology Transfer* 32(1/2), 63–85.
- Lim, H., R. Widdows, and J. Park (2006). "M-loyalty: Winning Strategies for Mobile carriers," *The Journal of Consumer Marketing* 23(4), 208–218.
- Lindic, J., and D. S. Marques (2011). "Value Proposition as a Catalyst for a Customer Focused Innovation," *Management Decision* 49(10), 1694–1708.
- Lumpkin, G. T., and G. G. Dess (1996). "Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance," *Academy of Management Review* 21(1), 135–172.
- McFadzean, E., A. O'Loughlin, and E. Shaw (2005). "Corporate Entrepreneurship and Innovation Part 1: The Missing Link," *European Journal of Innovation Management* 8(3), 350–372.
- Malewicki, D., and K. Sivakumar (2004). "Patents and Product Development Strategies: A Model of Antecedents and Consequences of Patent Value," *European Journal of Innovation Management* 7(1), 5–22.
- Maritz, A. (2010). "Networking, Entrepreneurship and Productivity in Universities," *Innovation: Management, Policy and Practice* 12(1), 18–25.
- Maritz, A., and M. Salaran (2008). "Organizational Innovation and Entrepreneurship in Universities," *International Journal of Organizational Innovation* 1(1), 52–67.
- Mechinda, P., S. Serirat, and N. Gulid (2009). "An Examination of Tourists' Attitudinal and Behavioral Loyalty: Comparison between Domestic and International Tourists," *Journal of Vacation Marketing* 15, 129–148.
- Mirza, W. A., and B. Ali (2011). "The Dilemma of Knowledge Management, Innovation and Entrepreneurship in SMEs: An Empirical Study," *Interdisciplinary Journal of Contemporary Research in Business* 3(2), 1112–1128.
- Moliner, M. (2009). "Loyalty, Perceived Value and Relationship Quality in Healthcare Services," *Journal of Service Management* 20(1), 76–97.
- Monty, B., and M. Skidmore (2003). "Hedonic Pricing and Willingness to Pay for Bed and Breakfast Amenities in Southeast Wisconsin," *Journal of Travel Research* 42(2), 195–199.
- Nasution, H. N., F. T. Mavondo, M. J. Matanda, and N. O. Ndubisi (2011). "Entrepreneurship: Its Relationship with Market Orientation and Learning Orientation and as Antecedents to Innovation and Customer Value," *Industrial Marketing Management* 40(3), 336–345.
- Ngo, L. V., and A. O'Cass (2011). "The Relationship between Business Orientations and Brand Performance," *Asia Pacific Journal of Marketing and Logistics* 23(5), 684–713.
- Nuntsu, N., D. Tassiopoulos, and N. Haydam (2004). "The Bed and Breakfast Market of Buffalo City (BC), South Africa: Present Status, Constraints and Success Factors," *Tourism Management* 25(4), 515–522.
- O'Cass, A., and J. Weerawardena (2009). "Examining the Role of International Entrepreneurship, Innovation and International Market Performance in SME Internationalisation," *European Journal of Marketing* 43(11), 1325–1348.
- Omar, C. M. Z. C., and O. Jusoh (2010). "A Theoretical Investigation into Entrepreneurship and Organizational Innovation-Based Competitive Strategy in Malaysia," *Journal of International Management Studies* 5(2), 12–20.
- Ottenbacher, M. C., and R. J. Harrington (2010). "Strategies for Achieving Success for Innovative versus Incremental New Services," *The Journal of Services Marketing* 24(1), 3–15.
- Pandza, I., and C. Vignali (2010). "Customer Perceived Value and Differences between Customer's and Firm's Perception," *International Journal of Business and Globalisation* 5(4), 436–450.
- Plewa, C. (2009). "Exploring Organizational Culture Difference in Relationship Dyads,"

- Australasian Marketing Journal* 17(1), 46–57.
- Rauch, A., J. Wiklund, G. T. Lumpkin, and M. Frese (2009). “Entrepreneurial Orientation and Business Performance: An Assessment of Past Research and Suggestions for the Future,” *Entrepreneurship Theory and Practice* 33(3), 761–787.
- Renko, M., A. Carsrud, and M. Brännback (2009). “The Effect of a Market Orientation, Entrepreneurial Orientation, and Technological Capability on Innovativeness: A Study of Young Biotechnology Ventures in the United States and in Scandinavia,” *Journal of Small Business Management* 47(3), 331–369.
- Rita, G. M. (2001). “Exploratory Learning, Innovative Capacity, and Managerial Oversight,” *Academy of Management Journal* 44(1), 118–131.
- Robson, P. J. A., H. M. Haugh, and B. A. Obeng (2009). “Entrepreneurship and Innovation in Ghana: Enterprising Africa,” *Small Business Economics* 32(3), 331–350.
- Roig, J. C. F., J. S. García, and M. Á. M. Tena (2009). “Perceived Value and Customer Loyalty in Financial Services,” *The Service Industries Journal* 29(6), 775–789.
- Ruiz-Moreno, A., and F. Llorens-Montes (2008). “The Moderating Effect of Organizational Slack on the Relation between Perceptions of Support for Innovation and Organizational Climate,” *Personnel Review* 37(5), 509–525.
- Salavou, H., and S. Lioukas (2003). “Radical Product Innovations in SMEs: The Dominance of Entrepreneurial Orientation,” *Creativity and Innovation Management* 12(2), 94–108.
- Sebora, T. C., and T. Theerapatvong (2010). “Corporate Entrepreneurship: A Test of External and Internal Influences on Managers’ Idea Generation, Risk Taking, and Proactiveness,” *International Entrepreneurship and Management Journal* 6(3), 331–350.
- Seyed, H. J. (2012). “The Explanation of Relationship between Strategic Orientation and Export Performance,” *The Journal of Commerce* 4(1), 40–46.
- Soltani, I., and J. Gharbi (2008). “Determinants and Consequences of the Website Perceived Value,” *Journal of Internet Banking and Commerce* 13(1), 1–13.
- Sparks, B., G. Bradley, and G. Jennings (2011). “Consumer Value and Self-Image Congruency at Different Stages of Timeshare Ownership,” *Tourism Management* 32(5), 1176–1185.
- Tajeddini, K. (2010). “Effect of Customer Orientation and Entrepreneurial Orientation on Innovativeness: Evidence from the Hotel Industry in Switzerland,” *Tourism Management* 31(2), 221–231.
- Tejada, P., and P. Moreno (2013). “Patterns of Innovation in Tourism ‘Small and Medium-Size Enterprises,’” *The Service Industries Journal* 33(7–8), 749–758.
- Trejo, J. M., J. S. Gutiérrez, and G. F. Jasso (2011). “Measuring Innovation: Clusters and Competitiveness in Jalisco, Mexico,” *Competition Forum* 9(1), 42–48.
- Tsaur, S.-H., and C.-H. Wang (2011). “Personal Ties, Reciprocity, Competitive Intensity, and Performance of the Strategic Alliances in Taiwan’s Travel Industry,” *Service Industries Journal* 31(6), 911–928.
- Urban, B. (2006). “Entrepreneurship in the Rainbow Nation: Effect of Cultural Values and ESE on Intentions,” *Journal of Developmental Entrepreneurship* 11(3), 171–186.
- van Gelderen, M. (2010). “Autonomy as the Guiding Aim of Entrepreneurship Education,” *Education and Training* 52(8), 710–721.
- Verhees, F. J. H. M., and M. T. G. Meulenbergh (2004). “Market Orientation, Innovativeness, Product Innovation, and Performance in Small Firms,” *Journal of Small Business Management* 42(2), 134–154.
- Victorino, L., R. Verma, G. Plaschka, and C. Dev (2005). “Service Innovation and Customer Choices in the Hospitality Industry,” *Managing Service Quality* 15(6), 555–576.
- Wakefield, K. L., and J. G. Blodgett (1999). “Customer Response to Intangible and Tangible Service Factors,” *Psychology and Marketing* 16(1), 51–68.
- Wang, Y., H. P. Lo, R. Chi, and Y. Yang (2004). “An Integrated Framework for Customer Value and Customer-Relationship-Management Performance: A Customer-Based Perspective from China,” *Managing Service Quality* 14(2), 169–182.
- Warnick, R. B., and L. R. Klar, Jr. (1991). “The Bed and Breakfast and Small Inn Industry of the Commonwealth of Massachusetts: An Exploratory Survey,” *Journal of Travel Research* 29(3), 17–25.
- Wu, K.-W. (2011). “Customer Loyalty Explained by Electronic Recovery Service Quality:

Implications of the Customer Relationship Re-Establishment for Consumer Electronics E-Tailers," *Contemporary Management Research* 7(1), 21–43.

Wu, W.-C., and C.-Y. Yang (2010). "An Empirical Study on the Impact of Differences in Bed and Breakfast Service Quality Attributes on Customers' Revisiting Desires," *Interna-*

tional Journal of Organizational Innovation 2(4), 223–240.

Zhang, J., and Y. Duan (2010). "Empirical Study on the Impact of Market Orientation and Innovation Orientation on New Product Performance of Chinese Manufacturers," *Nankai Business Review International* 1(2), 214–231.

Motivations and Opportunity Recognition of Social Entrepreneurs

by Ronit Yitshaki and Fredric Kropp

This study explores the motivations and opportunity recognition patterns of 30 Israeli social entrepreneurs (SEs) through life story analysis. The majority of participants were motivated by pull factors that included prosocial behaviors based on past or current life events. Others were motivated by push factors, including job dissatisfaction and a search for meaning. Based on grounded theory-building and sensemaking perspectives, we develop a theoretical process model that links motivations, opportunity recognition, and prosocial activities of SEs. Their experiences created an awareness of unmet societal needs, which led to opportunity recognition and formation of social ventures to help fill the gaps.

Introduction

Social welfare spending has been reduced in many countries, creating a gap between social needs and social services (Roper and Cheney 2005). This has resulted in a bigger role for the private sector and third sector in solving social problems (Haugh 2005). Consequently, social entrepreneurs (SEs) are increasingly important in filling unmet social needs. Yet, there is little understanding of SE motivations (Corner and Ho 2010; London 2010) and opportunity recognition in the domain of social entrepreneurship (Shaw and Carter 2007; Sullivan Mort, Weerawardena, and Carnegie 2003).

Carsrud and Brännback (2011) call for further research into the role of entrepreneurial motivations, including “What motivations drive opportunity recognition and how do they vary across

different types of entrepreneurs?” and “How do motives, values and skills interact to determine the behaviors of entrepreneurs, especially in opportunity recognition?” (p. 19). A better understanding of the characteristics and motivations of SEs can help foster their development and effectiveness. Davidsson (2005) outlines three distinct areas of entrepreneurship research that are also applicable to social entrepreneurship: how opportunities are created, how certain people discover and exploit the opportunities while others do not, and how the opportunities are exploited through different modes of actions. Carsrud and Brännback (2011) posit that motivations play a critical role in transforming entrepreneurial intentions into action, including identifying and exploiting opportunities: “Motivations may be the spark that transforms a latent intention into real action and

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therefore the missing link between intentions and action” (p. 12).

This study examines the interrelations between motivations and opportunity recognition of SEs. There are two main research questions: (1) What motivates SEs?; and (2) How do different motivations influence opportunity recognition among SEs?

We use the *life story method*, a form of narrative analysis, a useful approach in examining entrepreneurial motivations in general (Gartner 2008, 2010), and the motivations of SEs in particular (Nicholls 2010). The life story approach (Lieblich, Tuval-Mashiach, and Zilber 1998) is considered to be an appropriate method for theory-building as it enables a comprehensive examination of SE sensemaking, that is, the delineation SEs make between their motivations and patterns of actions (Baron 2012). This theory-building approach allows an in-depth understanding of our research questions, the motivations, and opportunity recognition of SEs (Eisenhardt 1989; Strauss and Corbin 1994).

This study focuses on small-scale local SEs who are representative of the vast majority of their SE cohort, provide a quick response for social needs of local communities, and have significant impact. A better understanding of the SEs’ motivations and how they are transformed into opportunities offers the potential to enhance their effectiveness.

SEs’ Motivations

There is much debate over the definition of social entrepreneurship (e.g., Corner and Ho 2010; Martin and Osberg 2007; Shaw and Carter 2007). Zahra et al. (2009) state that social entrepreneurship “encompasses the activities and processes undertaken to discover, define, and exploit opportunities in order to enhance social wealth by creating new ventures or managing existing organizations in an innovative manner” (p. 519). Martin and Osberg (2007) describe SEs as those who identify “a stable but inherently unjust equilibrium that causes the exclusion, marginalization, or suffering of a segment of humanity that lacks the financial means or political clout to achieve any transformative benefit on its own” (p. 35; see Martin and Osberg for a more detailed discussion of rationalizing alternative definitions). We rely on both of these definitions as the conceptual underpinning of social entrepreneurship.

Socially driven motivations are a critical component in the creation of social value. The commercial entrepreneurship literature emphasizes that entrepreneurial motivations are related to discovering and exploiting new opportunities (Shane and Venkataraman 2000) based on human capital and learning capabilities such as information acquisition and transformation (Corbett 2007). On the firm level, commercial ventures are characterized as having an entrepreneurial orientation, that is, proactiveness, risk-taking, innovativeness, competitive aggressiveness, and autonomy (Lumpkin and Dess 1996). It is argued that many traits and behaviors of SEs are similar to commercial entrepreneurs including their drive, determination, and their maximum use of scarce resources (Shaw and Carter 2007).

A key difference between commercial entrepreneurs and SEs is that commercial entrepreneurs are driven by economic gain or by other personal goals, such as life style (Kropp, Lindsay, and Shoham 2006; Shane, Locke, and Collins 2003). SEs are compassionate toward suffering in the community (Miller et al. 2012). This compassion may be rooted in a general sense of empathy toward others based on one’s own similar life experiences, or a sense of sympathy that is not based on similar experiences. Both empathy and sympathy can be considered as motivations for prosocial activities (Powell and Baker 2013).

SEs are motivated by their ability to maximize social rather than economic returns (Sullivan Mort, Weerawardena, and Carnegie 2003). SEs often focus on long-standing social needs, whereas commercial entrepreneurs often focus on breakthroughs and new needs (Austin, Stevenson, and Wei-Skillen 2006). The motivation to create social impact drives SEs to accumulate resources and build organizations differently than commercial entrepreneurs (Dorado 2006). As motivated change agents, SEs challenge institutional structures (Dorado and Ventresca 2013).

SEs are motivated to change attitudes and behavior through multiple strategies, including cognitive, emotional, and behavioral approaches (London 2010). SEs’ motivations are based on balanced judgments that help shape the purpose of the venture and keep the social mission as a central focus (Sullivan Mort, Weerawardena, and Carnegie 2003).

Short, Moss, and Lumpkin (2009) examined the state of social entrepreneurship research

and identified alternative management theories for a wide range of research questions. They suggested examining SEs' motivation through the lens of *goal-setting theory*, a well-established, heavily researched management theory often used to explain work motivation in industrial and organizational theory. Although goal-setting theory is typically used to understand employees' motivations, commitment, and performance (Locke, Latham, and Erez 1988), we draw on this approach to better understand SE motivations. Goal-setting theory suggests that motivations are a set of conscious processes establishing levels of performance to achieve goals. Following Locke (1996), *actions caused by purpose* are conscious actions and choices that can be introspectively reported and analyzed. Motivations to accomplish goals are an important link between intentions and actions (Baron 2012; Carsrud and Brännback 2011). SE motivations are based on a desire to take actions that will benefit the community and the society (Baron 2012). Therefore, SE motivations are mission driven, designed to improve the well-being of a specific group or society at large.

Entrepreneurs' motivations can also be explained by drive and incentive theories. Drive theories focus on an internal stimulus to reduce internal tension; for example, hunger or fear drive a person to find food or to escape. Though often used in describing behaviors that have a strong biological component, drive theory can be applied to entrepreneurial behavior. For example, an SE might be so disturbed by a disadvantaged group's condition that he or she is driven toward prosocial activity. On the other hand, incentive theories focus on external incentives as a core motivation for action. For example, extrinsic motivations and necessity-based motivations can be seen as drivers for entrepreneurial actions (Carsrud and Brännback 2011).

We focus on push and pull motivations and career-calling perspectives in this study. Buttner and Moore (1997) identify two broad categories of motivations for starting ventures, *push factors* and *pull factors*. Pull factors refer to motivations for starting a venture for "desirable" reasons, such as the ability to seize an opportunity, to work independently, and/or to be more in control over the work (Robichaud, LeBrasseur, and Nagarajan 2010). Push factors refer to aspects of a situation that "push" a person out of an existing job, such as job frustration, limited

opportunities for advancement, and other factors that make staying in the job undesirable. Following Carsrud and Brännback (2011), drive theories can be seen as an inherent mechanism to reduce tensions for both pull and push motivations. They are also compatible with goal-seeking theory as SEs consciously undertake actions to accomplish desirable goals.

Push factors may be associated with personal or external factors. Push motivations characterize people who have fewer opportunities in the job market (Amit and Muller 1995). A Canadian study identified that entrepreneurs motivated by push factors were older, less educated, lacked skills, and were less likely to foresee future business opportunities compared with entrepreneurs motivated by pull factors (Robichaud, LeBrasseur, and Nagarajan 2010).

Pull factors are self-motivations driven by internal choices, such as identifying opportunities (Hakim 1989) and desires to be active socially in order to achieve social goals (Yitshaki and Kropp 2011). Based on career theory, pull factors may be viewed as *career calling*, work related to "a calling as work that a person perceives is his purpose in life" (Hall and Chandler 2005, p. 160). Career calling is based on an inner direction of meaning that offers the possibility of contributing to a better world (Bellah et al. 1996; Buechner 1973).

Career calling can be viewed in a religious context where it is based on a subjective and self-relevant view of meaning described as "divine inspiration" to do morally responsible work (Weber 1958). It can also be viewed secularly, deriving from an inner desire to serve others (Hall and Chandler 2005). The calling is identified by self-exploration methods such as introspection and reflection and is developed to fulfill personal needs. Individuals motivated by career calling are likely to be driven by intrinsic motivations for competence, autonomy, and relatedness (Gagné and Deci 2005; Wrzesniewski et al. 1997). They are characterized by self-awareness and high adaptability competencies that enable an understanding of one's calling and an ability to adjust accordingly (Hall and Chandler 2005).

Although motivation of commercial entrepreneurs has been studied (e.g., Shane and Venkataraman 2000; Shane, Locke, and Collins 2003), research on motivating factors for SEs is extremely limited and anecdotal. A comprehensive literature review could find few articles

that focused on motivations of SEs. A gap exists in the literature regarding SEs' personal motivations and their impact on their opportunity recognition patterns (Dorado 2006; Sullivan Mort, Weerawardena, and Carnegie 2003). This study examines motivations and develops a typology of different types of push and pull motivations. The interrelations between motivations and opportunity recognition are also examined.

Social Entrepreneurship and Opportunity Recognition

Stevenson and Gumpert (1985) describe an opportunity as something that is both desirable and possible. An opportunity represents the chance to meet a market need and deliver superior value through a creative combination of resources (Ardichvili, Cardoza, and Ray 2003). Shane and Venkataraman (2000) describe entrepreneurship as the process by which "opportunities to create future goods and services are discovered, evaluated, and exploited" (p. 218). Entrepreneurs pursue an opportunity using a unique set of scarce resources and skills in the hope of future returns (Morris, Kurtato, and Schindehutte 2001). Entrepreneurial opportunity recognition may be linked to an entrepreneur's learning capabilities (Corbett 2007) as well as prior knowledge (Shane 2000). Smith, Matthews, and Schenkel (2009) suggest that opportunity definition should be revised in light of the individual-opportunity nexus, knowledge associated with systematic searching, codified opportunities, and prior experience.

Though the form may be different, opportunity recognition and exploitation are important to commercial entrepreneurs and SEs. Both establish new ventures, develop and implement innovative programs, and initiate new services. Although many of the processes associated with entrepreneurial activities—for example, opportunity identification, assessment, and exploitation—are similar (Brooks 2009; Corner and Ho 2010; Meyskens et al. 2010), there are significant differences in the source of opportunities and the supporting activities and motivations.

Opportunity recognition in the social entrepreneurship arena can be viewed as an entrepreneur's ability to create a solution to a social problem (Hansen, Shrader, and Monllor 2011). "An 'attractive' opportunity is one that has sufficient potential for positive social impact to

justify the investment of time, energy, and money to pursue it seriously" (Guclu, Dees, and Anderson 2002, p. 1). Opportunity recognition in social entrepreneurship shifts the focus from future goods and economic return to social values and unmet social needs within the social system (Oncer and Yildiz 2010; Thompson, Alvy, and Lees 2000).

SEs recognize new opportunities based on their personal background (Corner and Ho 2010; Dorado 2006; Mair and Noboa 2006). Someone may become an SE after being personally affected by a problem such as an illness, for example (London 2010). Corner and Ho (2010) found that opportunity recognition in social ventures is based on a "spark"—an inspiration moment that evolves through an overarching pattern where the opportunity grows and is nurtured over time. Their study indicates that opportunity recognition involves exploitation by multiple actors who work together to create social value. The idea behind the venture evolves based on previous experience.

The ability to proactively set up goals, initiate new ideas, and achieve psychological success is influenced by career-calling competencies (Hall and Chandler 2005). Adaptability is important as it embodies an ability to identify needs and make personal changes to meet these needs. In addition, self-awareness is associated with one's identity. Accordingly, SEs' opportunity recognition can be explained by their career-calling motivations, their self-awareness, and their identity. It enables them to identify unmet social needs and take appropriate actions. Furthermore, SEs' self-awareness of social injustice may be associated with their career-calling competencies and their ability to identify and exploit new opportunities.

Social entrepreneurship activity is embedded in the social context "in which these opportunities surface, get recognized, and get exploited" (Corner and Ho 2010, p. 636). Examining motivations in isolation is static and limits the understanding regarding the dynamic evolution of the entrepreneurial process (Shane, Locke, and Collins 2003). Examining social entrepreneurship in different contexts offers the potential of a richer understanding (Di Domenico, Haugh, and Tracey 2010).

Methodology

The study is based on in-depth interviews, conducted during 2012, with 30 Israeli small-

scale SEs who initiated social ventures and were still active. The interviews were conducted by graduate students trained and under the direction of the authors of this study. A

summary of the respondents and type of activity appears in Table 1.

The Israeli context is unique as it combines elements of a modern developed nation known

Table 1
Social Venture Details

Social Ventures	Initials*	Age	Type	Established in
1	<i>A</i>	52	Support group for drug addicts	1989
2	<i>EL</i>	NA	Support group for new immigrants' families with children who become drug addicts	2007
3	<i>AR</i>	NA	Support group for divorced males	2005
4	<i>E</i>	NA	Orchestra for amateurs	1982
5	<i>MA</i>	NA	Support group for new immigrants	2008
6	<i>M</i>	44	Taking care of abandoned babies	2004
7	<i>AY</i>	75	Youth integration in the Kibbutzim	1978
8	<i>DS</i>	44	Support group for the LGBT community	1997
9	<i>Z</i>	44	Boarding school for children	2002
10	<i>ZP</i>	48	Day care center for disabled children	2001
11	<i>YLE</i>	NA	Soup kitchen and community support	2002
12	<i>NV</i>	61	Empowerment of women through entrepreneurship education	2003
13	<i>AA</i>	60	Promoting Rabbi Mohliver's ideology	1997
14	<i>RS</i>	35	Economic consulting and support	2009
15	<i>RP</i>	33	Encouragement of settlements in the Negev and Galil	2002
16	<i>DZ</i>	36	Financial support for people with severe health problems	2001
17	<i>EE</i>	74	Providing support to Mizrahi woman	2000
18	<i>AG</i>	NA	Providing support for Ethiopian youth	2008
19	<i>DV</i>	34	Computer guiding in the periphery	2004
20	<i>YY</i>	46	Support center for women	2006
21	<i>RA</i>	48	Center for human dignity	2004
22	<i>SA</i>	37	Providing information about children with special needs rights	2010
23	<i>AH</i>	55	Empowerment and employment for Ethiopian academics	2007
24	<i>EBZ</i>	63	Wigs for cancer patients	2009
25	<i>YL</i>	62	Helping with healthcare expenses	2002
26	<i>RSL</i>	55	Birthday angels	2006
27	<i>YV</i>		Providing support for disabled children	
28	<i>AD</i>	35	Support group for LGBT youth	2002
29	<i>AY</i>	68	Support group for religious people who decided to become secular	1991
30	<i>KB</i>	NA	Support group for evacuated communities near Gaza	2005

*Respondents were promised anonymity.

for its neoliberal economic policy and significant investments in high technology (Senor and Singer 2009) with immigrants who often come from less developed economies. Social entrepreneurship plays an important role in Israeli society. There are growing numbers of social ventures that provide services for unmet needs (Gidron, Bar, and Katz 2004).

SEs were asked to talk about their motivations and their ventures in any way they chose. Each interview took between 90 and 120 minutes. All interviews were tape-recorded and later transcribed verbatim.¹ Participants discussed their personal story/history and its relation to their actions in the present.

Exploring behaviors by focusing on entrepreneurs' stories can provide deep insights into their motivations (Anderson 2000; Gartner 2008, 2010; Goss 2005; Mitchell 1997). The life stories method analyzes the way respondents express their self-identity by the references they make to past, present, and future actions (Lieblich, Tuval-Mashiach, and Zilber 1998). The technique is a narrative approach where stories provide comprehensive information about how entrepreneurs construct the inference between past and present events and the coherence between the events, thoughts, and emotional expressions they choose to introduce (Lieblich, Tuval-Mashiach, and Zilber 1998; McAdams 1999; McKenzie 2005; Rae 2005). In addition, life stories of entrepreneurs enable examination of the ways in which entrepreneurs learn and grow (Hytti 2005; Rae 2004, 2005; Rae and Carswell 2000).

The stories told by entrepreneurs "provide some very powerful tools for exploring what entrepreneurs (or others) say about what they do" (Gartner 2007, p. 616). The stories require respondents to integrate their experiences in a coherent and plausible way (Mitchell 1997). Giving weight to the inferences and interpretations of meanings that interviewees make enables an understanding of the implicit dimensions of their story (Lieblich, Tuval-Mashiach, and Zilber 1998). Entrepreneurs' stories reflect subjective sensemaking of actions and an indication of the entrepreneurs' emotions during the entrepreneurial process (Downing 2005). Following Weick, Sutcliffe, and Obstfeld (2005), "sensemaking involves

that ongoing retrospective development of plausible images that rationalize what people are doing" (p. 409). The sensemaking approach emphasizes the "interplay of action and interpretation rather than the influence of evaluation on choice" (Weick, Sutcliffe, and Obstfeld 2005, p. 409).

Thus, the use of the life story method can be seen as "narrative truth" representing remembered facts and a presentation of people's selves that is made according to specific momentary influences, rather than accurate scientific truth (Jones, Latham, and Betta 2008; Lindgren and Packendorff 2009).

The life story method is an inductive approach (Lieblich, Tuval-Mashiach, and Zilber 1998). According to Eisenhardt (1989), a theory-building approach is needed at "times when little is known about a phenomenon, [and] current perspectives seem inadequate because they have little empirical substantiation, or they conflict with each other or common sense" (p. 548). Accordingly, this study is based on a discovery process that can lead to a theoretical conceptualization, which uncovers "patterns of actions and interaction between and among various types of social units" (Strauss and Corbin 1994, p. 278).

Data Analysis

Following the life story approach, the interviews were analyzed in two stages. First, each interview was analyzed separately, based on the meaningful life events told by the SE. We analyzed the references made between their past events (life events, experience in early childhood, and values they absorbed from their parents) and actions they decided to take in the present. Each story was examined with respect to internal consistency to understand the internal coherence of the story and the inferences made between the story parts (Lieblich, Tuval-Mashiach, and Zilber 1998).

The progression of each story was also considered. As SEs had an ability to start their own story independently, each story was unique because some participants related to a life event at the beginning of the interview, whereas others were more systematic. Participants are active constructors of meaning by presenting their subjective interpretations and

¹All interviews were conducted in Hebrew and then translated into English. Respondent comments in quotations are translations that attempt to capture what was said in Hebrew.

an understanding of their behavior (Cassell and Symon 1994). Overall, the themes identified in the first stage of analysis provided an initial understanding of the patterns that emerged from the data. These patterns can be considered as a preunderstanding stage (Gummesson 2000), providing a basis for further analysis.

In the second stage, we analyzed similar themes that emerged across the stories. We categorized references and identified patterns that emerged regarding motivations and opportunity recognition. Similar to case study analysis methodology (Eisenhardt 1989), the data analysis process was based on both “within” story and “cross” story analysis. As most of the themes emerged in each particular story, we were able to shift the analysis from the individual level to collective analyses. The second phase of data analysis enabled an understanding (Gummesson 2000) of the patterns of connec-

tions SEs made between life events, motivations, and opportunity recognition. In addition, each story was analyzed with respect to its internal coherence. The entrepreneurs identified their dominant or primary motivations that led them to identify a social opportunity. In discussing opportunity recognition, some entrepreneurs described that they went through a process of idea evolution. A detailed example of the data analysis process is shown in Figure 1.

To obtain a systematic data structure, we also followed the first and second order analysis usually recommended in cases of grounded theory (Gioia, Corley, and Hamilton 2012; Pratt, Rockmann, and Kaufmann 2006). At this stage, our aim was to follow the sensemaking of the respondents’ thoughts, intentions, and actions (Clark et al. 2010; Gioia, Corley, and Hamilton 2012) to better understand the motivations. As shown in Figure 2, the data structure provides a

Figure 1
Data Analysis Phases

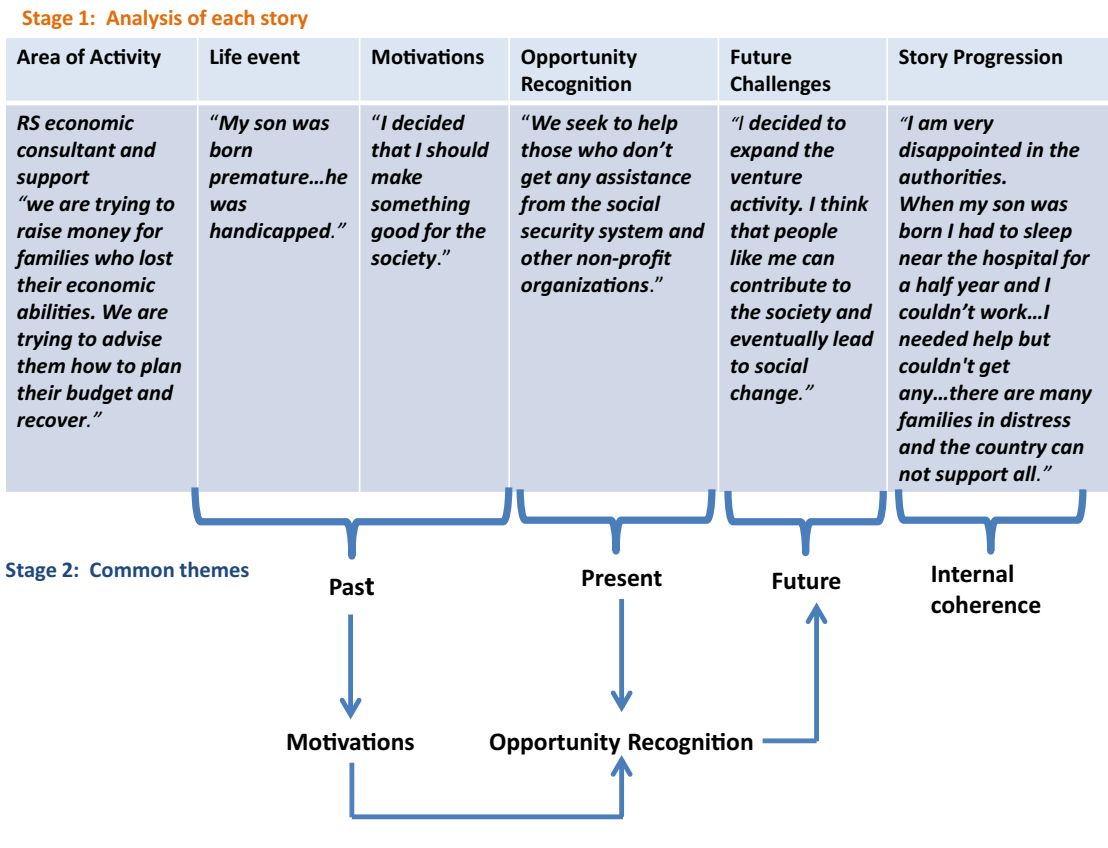
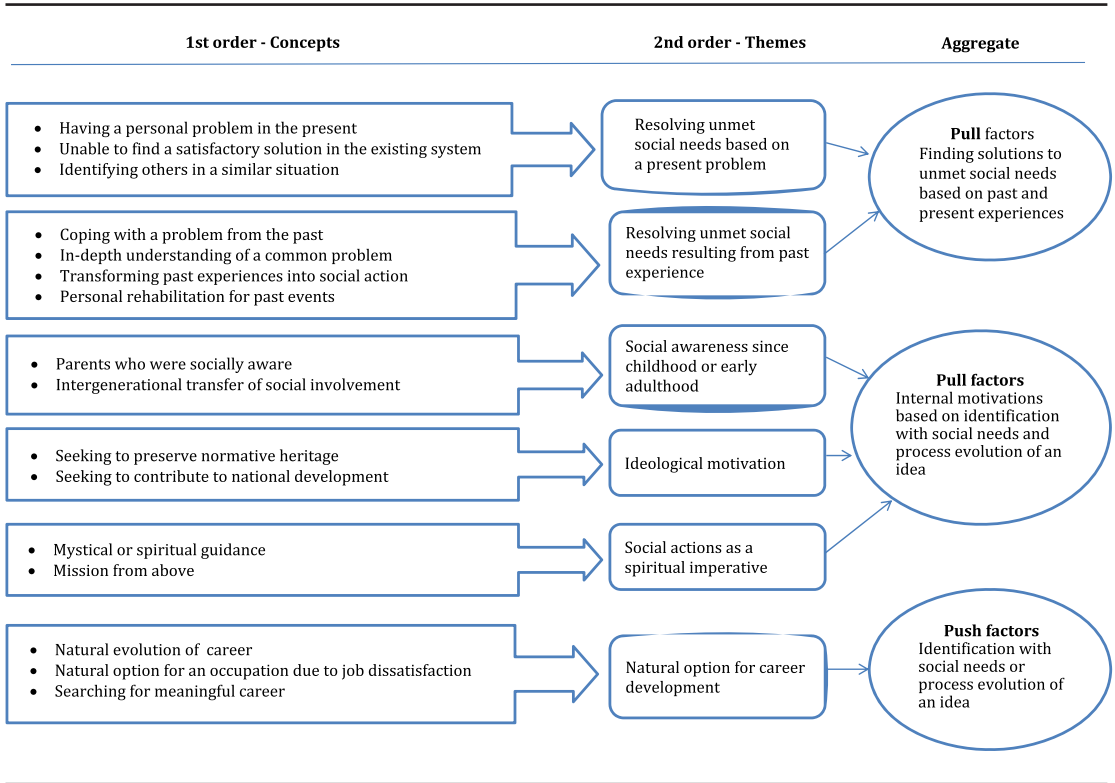


Figure 2
Data Structure



systematic understanding of the interrelations between different stages of data analysis and SE motivations.

To validate and triangulate the themes that emerged from the data, we compared them with interviews with Israeli SEs conducted by Bar Shalom and Sarel (2011). This additional step was conducted in order to increase validity (Creswell and Miller 2000). The emergent themes from the life story interviews are similar to those addressed by Bar Shalom and Sarel, providing confidence in the reliability and validity of the results (Morse et al. 2002).

Findings

Pull Factors

The analysis identified 18 of the 30 (60 percent) SEs who were primarily motivated by pull factors, self-motivations based on internal choices, and desires to be socially active to achieve social goals. The pull factors were divided into three general subcategories: life events in the present and the past; social aware-

ness since childhood; and ideological motivations. In addition, some of the SEs described personal rehabilitation and spiritual guidance as underlying motivations.

Ten out of 18 “pull” SEs related their primary emotional motivations to life events. The decision to become an SE differed according to when the life event occurred. Two main patterns of emotional motivations emerged: emotional motivation based on life events in the present and emotional motivation based on life events in the past.

Pull Factors—Life Events in the Present. SEs in this category relate to their personal experiences in coping with a specific problem that was not adequately supported by the social system. Their motivation was to solve their own problem by identifying other people who were experiencing similar problems. For example, SA explained, “My middle daughter suffers from cerebral palsy. Due to my disappointment with the national bureaucracy I decided that

somebody should do something in order to assist parents of such children to cope with the difficulties.”² *ZP*, who established a venture for educating disabled children, stated. “Actually, I didn’t do it for the community—it is not the point . . . it came to me from my daughter and not from any other place.”

EL established a social venture to support new immigrant families with children who became drug addicts as a result of her own experience. Her son became a drug addict, and she felt helpless. She decided to “look for women that experienced similar problem . . . I decided to organize them because when you are alone you are vulnerable but if you are unified as a group, you have power.”

Even though the initial awareness of the problem became salient from their personal situations, in these three cases, the motivations extended beyond helping their own family members. Rather the SEs were empathic toward and wanted to improve the lot of other people in similar situations, to prevent them from undergoing the pain that they, themselves, had experienced. Even *ZP*, who stated, “I didn’t do it for the community,” started a social venture that benefitted the community.

Pull Factors—Life Events in the Past (Early Childhood and Adulthood). SEs in this category relate to life events in the past, either as children or as adults. They identified a critical event that motivated them to establish a social venture to solve a problem they faced in the past. For example, *YL* makes a direct association between his experience as a child and his actions as an SE. “Many times we didn’t have Purim rituals and I remember that I felt ashamed . . . what is important to me is to protect other children from some of the difficulties I faced as a child, not only the material issues but also emotionally . . . I also have a hungry baby deep in my soul. I relate to baby’s food as an important medicine for ill people—that’s why we also help with baby food.”

Similarly, *NV* explained that her own experience as a divorced woman led her to become

active to help economically empower other women. “I was beaten in my soft stomach . . . I thought that everything a woman needed is love . . . and then I found myself alone . . . I could never be active in this field without my experience . . . entrepreneurship can empower women . . . I transferred that love I had in my previous life to other women, to internal love.” Similarly, *A* was motivated to be active on behalf of divorced men because of his divorce experience and the tendency of the court to “discriminate between women and males.”

DS said his motivation was based on his experience as a young adult when he recognized that he was gay and could not get appropriate support. “I think to myself what pushed me, what pushed me to invest so much and I think that my main motivation is . . . the trauma I experienced between the ages of 14–18, the life in a confusion zone led me eventually to be active. Retrospectively it was a way for personal rehabilitation.”

In his story, *RS* made an indirect connection between his life event experience and motivation to assist families in economic crisis. “I am the kind of person that doesn’t like to be assisted . . . several years ago my child was born as a premature baby after seven years of fertility treatment. My world collapsed. I felt that I can’t trust anybody, I needed others’ help but I felt frustrated because I didn’t have any support . . . I then decided to be active in making something good for society.”

In all of these cases, the SEs experienced pain in the past. Each created a social venture that would help alleviate others from experiencing the pain, shame, abuse, or confusion that they had experienced. They want to help individuals in similar circumstances.

One part of emotional motivation for SEs involves transforming past events into collective action. These SEs expressed their activity as *Tikun*, a religious concept that means a kind of healing or rehabilitation.

AY established a social venture to integrate young people in the kibbutz³ movement. “I thought I wouldn’t become a social entrepreneur if there weren’t open wounds inside me,

²Even though the respondents’ comments are in quotes, they are not a word-for-word translation from Hebrew to English. Rather they attempt to capture what was said in Hebrew in a more readable form. The comments represent a sample of what was said.

³A kibbutz is a socialist community where property is collectively owned. The plural of kibbutz is kibbutzim. In Israel, there are secular and religious kibbutzim.

the tremendous pain I experienced in my childhood, the feeling that nobody appreciated me, the way they treated me like a *schlemiel*.”⁴ *DS*, who established a support group for the LGBT (lesbian, gay, bisexual, and transgender) community said, “In my opinion, the experience I had, being a scared boy at the age of 14, who discovered that he was gay and didn’t have any place to go, became a dominant theme in explaining my activities. My primary motivation was to produce a safe place for other young people in order to prevent them from having the experiences I had . . . In some ways, retrospectively, it was a personal rehabilitation.” Similarly, *NV*, who established a social venture to empower women through entrepreneurship education said that her experience as a young divorced woman guided her. “I invest in my volunteers as if they were my best friends . . . it is like I am compensating myself from where I was hurt and I had a chance to correct it.”

Pull Factors—Social Awareness since Childhood. SEs in this category connect their motivations to a social awareness since childhood, the values they absorbed from their parents’ behavior, and how their social awareness was shaped unconsciously during their childhood. *A* explained, “My father served the community, my grandfather served the community. I might have the genes of leaders . . . similar to genes of people who have addiction . . . since I was in kindergarten I was a leader, as my father and grandfather were. Like intergeneration transfer of leadership, like alcoholism.”

M spoke of her compassion, referring to her initiative to take care of abandoned babies, “like my mother who chose to adopt the ugliest dog from the kennel because she knew that nobody would pick him.” *AY* related to his parents as a role model for his educational activities: “Although my late parents faced many difficulties, they raised my two cousins as if they were two of my natural four brothers.”

SEs in this category often spoke about values that were transmitted to them from their parents or grandparents that created awareness in childhood or early adulthood. These values were modeled by elders and became an inherent part of their motivations.

Pull Factors—Ideological Motivation. Three people discussed their ideological motivation for becoming SEs. *RP* said that his tendency to become socially active emerged when he was 17 after visiting the concentration camps. He decided to establish a social venture based on “spreading light and good things.” *RP* said that together with friends “we looked for an idea that would gather as many young people as possible. An idea that many people in the society can share and that can be measured . . . we then discovered that settlements in the Negev and the Galil⁵ could meet these criteria.”

AA established a college and a museum to celebrate Rabbi Mohliver, an early Zionist. “I hope that the college will contribute to Rabbi Mohliver’s ideology based on ‘peace and love.’” *E* spoke about his desire to integrate musicians and establish an orchestra for amateurs. Creating musical organizations can “contribute to the individual’s emotional wellbeing and family harmony. If one is more relaxed or content he can be more at peace.”

Pull Factors—Mystical or Spiritual Guidance and Mission from Above. Respondents described a spiritual component to becoming SEs. *A*, who established a support group for drug addicts, said that he got his mission of becoming an SE in a mystical way. He decided to help drug addicts after one of the addicts he knew died and left a letter, money, and a will with a request to “do whatever you can to prevent other people from dying from drugs . . . I am leaving you the necessary money for that.”

Z, who established a boarding school for children, stated that his decision to be active as an SE was directed from above. “I am a spiritual man, so it is hard to me to think that I decided something so dramatic regarding my life path. There is God above me. He open doors and shows the way. There is much that doesn’t depend on me.”

Push Factors

Twelve (40 percent) of the SEs described their decision to become SEs as a natural option for career development. *MA*, who supports new immigrants, explained that she was very frus-

⁴A bungler, inept or unlucky person, for whom things never seem to turn out well.

⁵Galilee is part of the Galil region. Both the Negev, a desert, and the Galil are underpopulated regions of Israel.

trated by the way the social welfare system treated new immigrants. The idea for the social venture was based on her professional experience: "I am a social worker . . . I saw that new immigrants face problems when they apply to public institutions . . . public institutions are incapable of providing services that fit their clients as business institutions do."

Another SE stated that his motivation was related to job dissatisfaction. *AG*, who provides support for Ethiopian youth and immigrants, said he was dissatisfied with what he was doing and wanted to find something more satisfying. "At the beginning I felt that I was dissatisfied with my occupation in marketing. It led me to look for something that would satisfy my soul. I looked for a special niche."

Other respondents identified job dissatisfaction as a motivator for leaving their jobs in the commercial world or government service to become an SE. For example, *YL* became an SE as a transition between jobs. "I was a banker for years and I had a very senior position. Then I had a private company that failed . . . and I started to work in a volunteer association." Others said that they looked for a fulfilling and meaningful career. *AH* explained: "I was successful but didn't get up in the morning with joy to chase after people's money . . . Those were not the values I was taught. My partner and I decided to establish a new venture that would have deep meaning for our souls . . . we wanted to do something meaningful together."

Opportunity Recognition by SEs

SE opportunity recognition was based on several patterns: identifying opportunities based on life events in the present and in the past, identifying social needs, and finding an idea that evolves over time.

Identifying Opportunities Based on Present and Past Experience. SEs in this category identified gaps based on their own life events. They experienced personal problems but could not get adequate help. Their motivation was highly interrelated to social awareness and opportunity recognition.

Some SEs related their life events to their activities in the present. When referring to opportunity recognition, they described unmet needs that led them to establish social ventures, searching for other people who dealt with the same problem. *ZP* explained that when he

could not find an appropriate school for his disabled daughter, he "cooperated with other parents who decided to do things alone [without help from outsiders]. We did everything independently, we established a summer camp and we saw that we are not alone, many parents face a similar problem."

Others in this category identified opportunities related to problems faced in the past and their inability to fulfill unmet needs. These SEs connected their vulnerability in the past to a desire to help other people in similar circumstances cope in the present. *NV*, who established a social venture to empower other women through entrepreneurial training, connected her past experience of divorce to her current activities. After she retired, she established a social venture to help women.

DS identified an opportunity to create a support group for the LGBT communities in Jerusalem. He was motivated by his own experience during adolescence when he realized that he was gay. "There is a community that doesn't get an answer . . . in my opinion the fact that at the age of 14 I was scared and didn't have anybody to speak to . . . was my motivation to create a safe place for youths, to prevent them from having the experience I had." *DS* also spoke about his activity as a "personal patch" of the trauma he experienced between the ages of 14–18.

Identification of Social Needs. SEs in this category are motivated by both pull and push factors, based on a gap between the national social services provided and the unmet needs of specific communities. Different from opportunity recognition that was based on life events, SEs in this category relate to their sensitivity for weak communities and the need to establish social ventures to meet their needs. *M* explained that by taking care of abandoned babies "we are actually fulfilling a gap that the country should be responsible for."

MA, who established an organization to support new immigrants, explained that "national services are not meant to give services that fit their customers like business ventures . . . they use cultural codes that cannot be understood by new immigrants . . . the snobbery of social services in regard to new immigrants is incredible." *MA* referred to her activity as an opportunity that combined her professional skills and the need for change in the social services.

Process Evolution of an Idea. This category includes SEs who identify opportunities as a process of the evolution of an idea during their professional and personal experience. They are motivated by both pull and push factors: social awareness since childhood and life events. However, the experiences led to social awareness for general social problems that was not directly connected to life story events. For example, *A*, who established a support group for drug rehabilitation said that he was involved in social activities abroad where he got a request for help from a drug addict. The turning point that led him to become an SE seems mystical. *A* explained that he got initial money from a man in his community who died from a drug overdose. "When I went to this person's grave to ask his forgiveness because I didn't help him [when he asked], his daughter came to me and gave me an envelope with a letter from her late father who asked me to do whatever I could to prevent other people dying from the 'white monster' . . . 'I leave you money for that.'"

RS established a social venture to assist families in economic trouble: "I saw a friend who was active in helping families who had to raise money for health treatments and I fell in love with the idea of giving without return." *RS* explained that he was looking for a similar idea and eventually decided to "help needy people who fall between the social system and other social ventures, people who don't get assistance."

Table 2 summarizes the interrelations found between SE motivations and opportunity recognition.

Discussion

Despite the growing numbers of SEs who fulfill unmet social needs, there is a paucity of research on SE motivations and opportunity recognition (Corner and Ho 2010; Shaw and Carter 2007). The aim of this study was to explore the motivations of SEs and how they identify opportunities. It is aligned with a recent call to examine the ways in which entrepreneurs' motivations vary across types of entrepreneurs and how their motivations and values are interrelated with opportunity recognition (Carsrud and Brännback 2011).

Life story analysis revealed the introspection process of sensemaking through which SEs explained their motivations. SE stories demonstrated the relation between their understating

of their social mission (calling) and the way in which they adapted to this understanding (Hall and Chandler 2005). Based on goal setting perspective, our findings indicate that different motivations led to conscious and purposeful actions of SEs. SEs' stories demonstrate the sense-making and consciousness processes that leads to purposeful actions to achieve social goals (Locke 1996).

Comparing the study results with Corner and Ho (2010), our findings show that SE motivations are grounded in their pull and push factors rather than an inspiration or a "spark moment." Furthermore, our narrative analysis shows that SEs shape opportunities dynamically by drawing paths of meaning between their past experiences and present actions demonstrating that motivations are interrelated to opportunity recognition (Garud and Giuliani 2013). Their discovery of new opportunities is based on idiosyncratic life experiences and prior knowledge that creates a "knowledge corridor" and an ability to recognize opportunities that others might miss (Shane 2000).

The study findings contribute to the theoretical development of the social entrepreneurship literature through an empirical examination of the life stories of SEs, showing interrelations between SEs' motivations and opportunity recognition. As presented in Figure 3, we propose a theoretical process model that expands the current literature.

The model shows that different motivations lead to social awareness and opportunity recognition. Both cognitive and emotional processes are evoked in developing prosocial motivations (Miller et al. 2012; Powell and Baker 2013). The sense-making process introduces a cognitive scheme that enables entrepreneurs to draw connections between their life experience, social awareness, and purposeful action. In the sense-making process, entrepreneurs delineated cognitive explanations for actions that were taken to reduce emotional tension caused by problems they faced in the present or in the past (Weick, Sutcliffe, and Obstfeld 2005).

In some cases, the time span to transform SE social awareness into action can be lengthy and can be explained retrospectively (Baron 2012). Though goal-setting theory suggests that actions are conscious, our model shows that in the case of personal rehabilitation and long-standing social awareness, consciousness

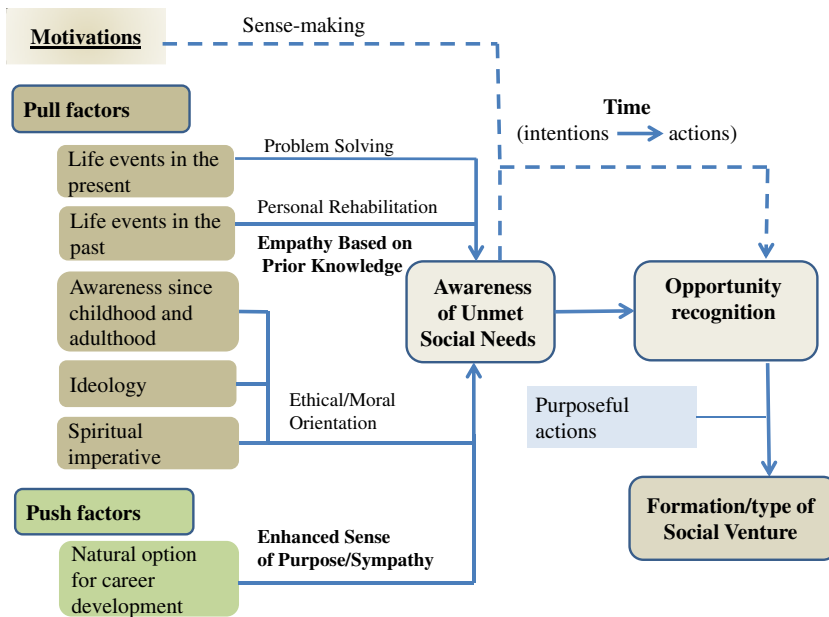
Table 2
Findings Summary**

Opportunity Recognition Entrepreneur Motivations	Finding Solution Based on Present Experience (N = 5)	Finding Solution Based on Past Experience (N = 5)	Identification with Social Needs (N = 14)	Process Evolution of an Idea (N = 6)	Distribution of Motivations
Pull Factors					
Live Events:					
Present Experience	2, 10, 22, 24, 30	8, 12, 16		14	
Past Experience		3, 11		9**	
Social Awareness since Childhood			6	1**, 7	
Ideology			4, 13, 15		18 Pull (60 percent)
Push Factors					
Natural Option for Career Development			5, 17, 18, 19, 20, 21, 23, 27, 28, 29	25**, 26	12 Push (40 percent)

*Numbers in cells correspond to the social ventures in Table 1.

**Entrepreneurs who mentioned mystical or spiritual guidance and mission from above.

Figure 3
From Motivation to Opportunity Recognition



actions evolved over time as suggested by Garud and Giuliani (2013). Similarly, the evolution of social awareness in push motivations can also be lengthy as they develop social awareness and identification with unmet social need over time. Our findings indicate that social awareness among push motivations evolve because of different triggers, from opportunities discovered in their jobs, a desire to take an action because of job dissatisfaction, and a search for a meaningful activity.

Our findings expand the literature on SE opportunity recognition by showing that most SEs driven by pull factors become socially aware through life events. This finding is aligned with Smith, Matthews, and Schenkel's (2009) understanding that opportunity recognition based on previous experience uses tacit knowledge to identify new opportunities. Our findings suggest that tacit knowledge can be gained in the social arena through personal experience and social awareness rather than knowledge accumulated through prior work experience (Shane 2000).

Our process model demonstrates key differences between social and commercial entrepreneurs as it provide an important insight for the

antecedents that lead to opportunity recognition by SEs. Similar to commercial entrepreneurs, opportunity recognition among SEs is driven by goal setting. However, it seems that the process of opportunity recognition in the social entrepreneurship arena is inherently different. Identifying an opportunity in the social arena is most often connected with solving a problem. It involves a process of resolving a tension between unmet social need that is linked to a broad social mission in favor of the community rather than a gap between needs and demands. Though commercial entrepreneurs' idea development occurs after an opportunity is identified (Shane, Locke, and Collins 2003), in the social entrepreneurship arena, the process of idea development occurs at the opportunity recognition stage, especially when SEs have tacit knowledge about specific social needs.

Our findings also contribute to the literature on entrepreneurial affect: SEs driven by pull factors related their feelings and actions to personal difficulties they faced. Our process model suggests that unlike commercial entrepreneurs (Shane, Locke, and Collins 2003), social awareness is a process in which people can feel a

tension regarding their own problems and unmet needs. Accordingly, prosocial behaviors demonstrate empathy to the suffering and needs of others based on the same experience or problem (Powell and Baker 2013). Our findings show that pull factor motivations associated with empathy and compassion that led to prosocial actions were based on SEs' own experience, whereas push factor motivations are not necessarily related to personal experience (Miller et al. 2012; Powell and Baker 2013).

Opportunity recognition caused by pull motivations was based on entrepreneurs' tacit understanding of the gap between a group's unmet needs. Accordingly, SEs driven by pull motivations were influenced more by career calling than mere vocational choice. In contrast, push factor motivations were typically related to job dissatisfaction or career development. These findings expand the understanding that affect has as an influence on SE motivations and opportunity recognition (Cardon et al. 2012). In addition, the role of affect in opportunity recognition among SEs suggests that opportunity recognition definitions should take into account emotional processes along with cognitive process (Hansen, Shrader, and Monllor 2011).

Limitations, Future Research, and Practical Implications

By design, our sample consisted of Israeli SEs. Israel is a unique country with elements of highly developed economies and elements of much less developed immigrants. Future research should occur in other countries with different demographic characteristics. One possible exploration could involve corresponding to the three categories used in the Global Entrepreneurship Monitor report (Kelley, Singer, and Herrington 2011): factor-driven economies (subsistence agriculture and extraction of natural resources), efficiency-driven economies (increased industrialization and economies of scale), and innovation-driven economies. This would allow a more detailed examination of motivations and opportunity recognition in different contexts.

Although the life story method examines motivations and the ways in which entrepreneurs learn and grow (Hytti 2005; Rae 2004, 2005; Rae and Carswell 2000), the stories were constructed retrospectively. It is possible that a hindsight or recollection bias could have been

introduced in a subconscious effort to make the motivations and identities consistent with actions taken.

Our sample focused on small-scale SEs who dealt with immediate problems, typically, on a local scale. Zahra et al. (2009) identify three different categories of SEs: social *bricoleurs* who tend to address small-scale local social needs, social constructionists who work on a larger scale within the existing social system, and social engineers who introduce revolutionary changes. Our sample is more aligned with social bricoleurs. Baker and Nelson (2005) define bricolage as "making do by applying combinations of resources at hand to new problems and opportunities" (p. 33). Responding to resource constraints, bricoleurs tend to operate in a penurious environment, engaging in creative reinvention using resources for purposes that may not have been originally intended (Fisher 2012; Senyard et al. 2013). They tend to improvise, making it up as they go along (Baker 2007; Baker, Miner, and Eesley 2003). However, not all of the SEs in our sample continued to be bricoleurs. Future research could focus on other categories of SEs, such as social constructionists and social engineers.

Further research can also consider exploring the differences between SEs' entrepreneurial processes suggested by Fisher (2012). Examining SEs' purposeful actions through different theoretical perspectives—causation, effectuations, and bricolage processes—can contribute to theoretical development regarding the interrelations between SEs' opportunity recognition and exploitation.

The role of individual values of SEs and their motivations can also be examined in future research. Individual values play a role in shaping attitudes and behaviors (Homer and Kahle 1988). Values are adaptive higher order social cognitions that serve as guiding principles in people's lives (Kropp, Lavack, and Silvera 2006; Schwartz 2005). People tend to act in ways that are consistent with their values. Contextually, values can be viewed as a motivational construct based on subjective beliefs that are tied to specific actions and situations (Schwartz 2005; Schwartz et al. 2009). Understanding values will help understand motivations.

Another area of future research involves collecting quantitative data to validate our theoretical process model. Though the life story method is useful in developing theory

(Eisenhardt 1989; Lieblich, Tuval-Mashiach, and Zilber 1998), using multi-method exploration is required to explore generalizability (Coviello and Jones 2004).

The findings of our study suggest practical implications for the field of social entrepreneurship. First, understanding SE motivations can help social investors evaluate SEs' ability to be successful prosocial actors based on their tacit knowledge about the unmet needs of specific communities. Social investors are usually concerned about the effectiveness of their investments. We believe that pull-motivated entrepreneurs can establish goals for unmet needs and also be passionate about prosocial activities in order to change governmental policies.

Similarly, a better understanding of the motivations and SE opportunity recognition can provide strategic input for government and quasi-government organizations to develop public policy to support nascent and early-stage SEs. These policy initiatives can be targeted to help the SEs translate their motivations from the opportunity recognition stage to venture creation. Programs can be developed to help support such entrepreneurs.

In speaking with numerous SEs, we identified a wide range of business sophistication. In the extreme, some of the SEs were well-intentioned people with little business experience who identified a problem and crafted a solution to it. Programs could be developed to assist these people in mastering what could broadly be called the business aspects of social entrepreneurship. An understanding of the motivations and opportunity recognition processes could enhance the probability of developing effective programs consistent with the values of the SE.

As described earlier, SEs can use different processes to create and maintain social ventures, such as causation, effectuation, and bricolage. In reality, SEs may use each of these processes in various stages of their ventures. Understanding the motivations, opportunity recognition, and the role they play in venture creations can enhance the effectiveness of SEs to create vision, elaborate strategic planning, establish measurable goals, and expand activities to different communities.

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References

- Amit, R., and E. Muller (1995). "Push and Pull Entrepreneurship," *Journal of Small Business and Entrepreneurship* 12(4), 64–80.
- Anderson, A. R. (2000). "The Protean Entrepreneur: The Entrepreneurial Process as Fitting Self and Circumstance," *Journal of Enterprising Culture* 8(3), 201–234.
- Ardichvili, A., R. Cardoza, and S. Ray (2003). "A Theory of Entrepreneurial Opportunity Identification and Development," *Journal of Business Venturing* 18(1), 105–123.
- Austin, J., H. H. Stevenson, and J. Wei-Skillen (2006). "Social and Commercial Entrepreneurship: Same, Different, or Both," *Entrepreneurship Theory and Practice* 30(1), 1–22.
- Baker, T. (2007). "Resources in Play: Bricolage in the Toy Store(y)," *Journal of Business Venturing* 22, 694–711.
- Baker, T., and R. E. Nelson (2005). "Creating Something from Nothing: Resource Construction through Entrepreneurial Bricolage," *Administrative Science Quarterly* 50(3), 329–366.
- Baker, T., A. Miner, and D. Eesley (2003). "Improvising Firms: Bricolage, Account Giving and Improvisational Competency in the Founding Process," *Research Policy* 32(2), 329–366.
- Bar Shalom, Y., and A. Sarel (2011). *Change by Doing: Narratives of Social Entrepreneurs in Israel*. Jerusalem: Carmel.
- Baron, R. A. (2012). *Entrepreneurship: An Evidence-Based Guide*. Cheltenham, UK: Edward Elgar.
- Bellah, R. N., W. M. Sullivan, S. M. Tipton, R. Madsen, and A. Swindler (1996). *Habits of the Heart: Individualism and Commitment in American Life*. Berkeley, CA: University of California Press.
- Brooks, A. C. (2009). *Social Entrepreneurship: A Modern Approach to Social Value Creation*. Cambridge, MA: Root Cause.
- Buechner, C. F. (1973). *Wishful Thinking: A Theological ABC*. New York: HarperCollins.
- Buttner, E. H., and D. P. Moore (1997). "Women's Organizational Exodus to Entrepreneurship: Self-reported Motivations and

- Correlates with Success,” *Journal of Small Business Management* 35(1), 34–46.
- Cardon, M. S., M. D. Foo, D. Shepherd, and J. Wiklund (2012). “Exploring the Heart: Entrepreneurial Emotion Is a Hot Topic,” *Entrepreneurship Theory and Practice* 36(1), 1–10.
- Carsrud, A., and M. Brännback (2011). “Entrepreneurial Motivations: What Do We Still Need to Know?,” *Journal of Small Business Management* 39(1), 9–26.
- Cassell, C., and G. Symon (1994). *Qualitative Methods in Organizational Research*. London: Sage.
- Clark, S. M., D. A. Gioia, D. J. Ketchen, and D. J. Thomas (2010). “Transitional Identity as a Facilitator of Organizational Identity Change during a Merger,” *Administrative Science Quarterly* 55, 397–438.
- Corbett, A. C. (2007). “Learning Asymmetries and the Discovery of Entrepreneurial Opportunities,” *Journal of Business Venturing* 22, 97–118.
- Corner, P. D., and M. Ho (2010). “How Opportunities Develop in Social Entrepreneurship,” *Entrepreneurship Theory and Practice* 34(4), 635–659.
- Coviello, N. E., and M. V. Jones (2004). “Methodological Issues in International Entrepreneurship Research,” *Journal of Business Venturing* 19(4), 485–508.
- Creswell, J. W., and D. L. Miller (2000). “Determining Validity in Qualitative Inquiry,” *Theory into Practice* 39(3), 124–130.
- Davidsson, P. (2005). *Researching Entrepreneurship*. New York: Springer.
- Di Domenico, M., H. Haugh, and P. Tracey (2010). “Social Bricolage: Theorizing Social Value Creation in Social Enterprises,” *Entrepreneurship Theory and Practice* 34(4), 681–703.
- Dorado, S. (2006). “Social Entrepreneurial Ventures: Different Values So Different Processes of Creation, No?,” *Journal of Developmental Entrepreneurship* 11(4), 319–343.
- Dorado, S., and M. J. Ventresca (2013). “Crescive Entrepreneurship in Complex Social Problems: Institutional Conditions for Entrepreneurial Engagement,” *Journal of Business Venturing* 28, 69–82.
- Downing, S. (2005). “The Social Construction of Entrepreneurship: Narrative and Dramatic Processes in the Coproduction of Organizations and Identities,” *Entrepreneurship Theory and Practice* 29(2), 185–204.
- Eisenhardt, K. M. (1989). “Building Theories from Case Study Research,” *Academy of Management Review* 14(4), 532–550.
- Fisher, G. (2012). “Effectuation, Causation and Bricolage: A Behavioral Comparison of Emerging Theories in Entrepreneurship Research,” *Entrepreneurship Theory and Practice* 36(5), 1019–1054.
- Gagné, M., and E. L. Deci (2005). “Self-Determination Theory and Work Motivation,” *Journal of Organizational Behavior* 26, 331–362.
- Gartner, W. B. (2007). “Entrepreneurial Narrative and a Science of the Imagination,” *Journal of Business Venturing* 22(5), 613–627.
- (2008). “Variations in Entrepreneurship,” *Small Business Economics* 31, 351–361.
- (2010). “A New Path to the Waterfall: A Narrative on a Use of Entrepreneurial Narrative,” *International Small Business Journal* 28(1), 6–19.
- Garud, R., and A. P. Giuliani (2013). “A Narrative Perspective on Entrepreneurial Opportunities,” *Academy of Management Review* 38(1), 157–160.
- Gidron, B., M. Bar, and H. Katz (2004). *The Israeli Sector: Between Welfare State and Civil Society*. New York: Kluwer Academic/Plenum Publishers.
- Gioia, D. A., K. G. Corley, and A. L. Hamilton (2012). “Seeking Qualitative Rigor in Inductive Research: Notes on the Gioia Methodology,” *Organizational Research Methods* 16(1), 15–31.
- Goss, D. (2005). “Entrepreneurship and ‘The Social’: Towards a Deference-Emotion Theory,” *Human Relations* 58(5), 617–636.
- Guclu, A., J. G. Dees, and B. B. Anderson (2002). “The process of social entrepreneurship: Creating opportunities worthy of serious pursuit,” Center for the Advancement of Social Entrepreneurship, Duke University, Durham, NC.
- Gummesson, E. (2000). *Qualitative Methods in Management Research*. London: Sage.
- Hakim, C. (1989). “New Recruits to Self-Employment in the 1980s,” *Employment Gazette* 97, 286–297.
- Hall, D. T., and D. Chandler (2005). “Psychological Success: When the Career Is a Calling,” *Journal of Organizational Behavior* 26, 155–176.

- Hansen, D. J., R. Shrader, and J. Monllor (2011). "Defragmenting Definitions of Entrepreneurial Opportunity," *Journal of Small Business Management* 49(2), 283–304.
- Haugh, H. (2005). "A Research Agenda for Social Entrepreneurship," *Social Enterprise Journal* 1(2), 1–12.
- Homer, P. M., and L. H. Kahle (1988). "A Structural Equation Analysis of the Value-Attitude-Behavior Hierarchy," *Journal of Personality and Social Psychology* 54, 638–646.
- Hytti, U. (2005). "New Meanings for Entrepreneurs: From Risk-Taking Heroes to Safe-Seeking Professionals," *Journal of Organizational Change Management* 18(6), 594–611.
- Jones, R., J. Latham, and M. Betta (2008). "Narrative Construction of the Social Entrepreneurial Identity," *International Journal of Entrepreneurial Behaviour and Research* 14(5), 330–345.
- Kelley, D. J., S. Singer, and M. Herrington (2011). *Global Entrepreneurship Monitor: 2011 Global Report*. Wellesley, MA: Babson College.
- Kropp, F., A. Lavack, and D. Silvera (2006). "Values and Collective Self-Esteem as Predictors of Consumer Susceptibility to Interpersonal Influence among University Students," *International Marketing Review* 22(1), 7–23.
- Kropp, F., N. J. Lindsay, and A. Shoham (2006). "Entrepreneurial, Market, and Learning Orientations and International Entrepreneurial Business Venture Performance in South Africa," *International Marketing Review* 23(5), 504–523.
- Lieblich, A., R. Tuval-Mashiach, and T. Zilber (1998). *Narrative Research: Reading, Analysis and Interpretation*. Thousand Oaks, CA: Sage.
- Lindgren, M., and J. Packendorff (2009). "Social Constructionism and Entrepreneurship; Basic Assumptions and Consequences for Theory and Research," *International Journal of Entrepreneurial Behaviour and Research* 15(1), 25–47.
- Locke, E. A. (1996). "Motivation through Conscious Goal Setting," *Applied and Preventive Psychology* 5, 117–124.
- Locke, E. A., G. P. Latham, and M. Erez (1988). "The Determinants of Goal Commitment," *Academy of Management Review* 13(1), 23–39.
- London, M. (2010). "Understanding Social Advocacy: An Integrative Model of Motivation, Strategy, and Persistence in Support of Corporate Social Responsibility and Social Entrepreneurship," *Journal of Management Development* 29(3), 224–245.
- Lumpkin, G. T., and G. G. Dess (1996). "Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance," *Academy of Management Review* 21, 135–172.
- McAdams, D. P. (1999). "Personal Narratives and the Life Story," in *Handbook of Personality: Theory and Research*, 2nd ed. Eds. L. A. Pervin and O. P. John. New York: Guilford, 478–500.
- McKenzie, B. (2005). "Collecting Oral Histories for Entrepreneurship Research," *New England Journal of Entrepreneurship* 8(1), 37–48.
- Mair, J., and E. Noboa (2006). "Social Entrepreneurship: How Intentions to Create a Social Venture Are Formed," in *Social Entrepreneurship*. Eds. J. Mair, J. Robinson, and K. Hockerts. London: Palgrave, 121–135.
- Martin, S., and R. Osberg (2007). "Social Entrepreneurship: The Case for Definition," *Stanford Social Innovation Review* 5(2), 26–39.
- Meyskens, M., C. Robb-Post, J. A. Stamp, A. L. Carsrud, and P. D. Reynolds (2010). "Social Ventures from a Resource-Based Perspective: An Exploratory Study Assessing Global Ashoka Fellows," *Entrepreneurship Theory and Practice* 34(4), 661–680.
- Miller, T. L., M. G. Grimes, J. S. McMullen, and T. I. Vogus (2012). "Venturing for Others with Heart and Head: How Compassion Encourages Social Entrepreneurship," *Academy of Management Review* 37(4), 616–640.
- Mitchell, R. K. (1997). "Oral History and Expert Scripts: Demystifying the Entrepreneurial Experience," *International Journal of Entrepreneurial Behaviour and Research* 3(2), 122–139.
- Morris, M. H., D. F. Kurtato, and M. Schindehutte (2001). "Reconceptualizing Entrepreneurship: An Input-Output Perspective," *International Journal of Entrepreneurship and Innovation* 59(1), 21–31.
- Morse, J. M., M. Barrett, M. Mayan, K. Olson, and J. Spiers (2002). "Verification Strategies for Establishing Reliability and Validity in Qualitative Research," *International Journal of Qualitative Methods* 1(2), 13–22.

- Nicholls, A. (2010). "The Legitimacy of Social Entrepreneurship: Reflexive Isomorphism in a Pre-Paradigmatic Field," *Entrepreneurship Theory and Practice* 34(4), 611–633.
- Oncer, A. C., and M. L. Yildiz (2010). "Creating Sustainable Value for Society: Social Entrepreneurship," *The Business Review, Cambridge* 14(2), 222–228.
- Powell, E. E., and T. Baker (2013). "How Can We Help? The Distinctive Impact of Empathy and Sympathy in the Emergence of Social Venture Missions," Paper presented at the mini conference on social change, innovation, and entrepreneurial activity, SASE, June, Milan, Italy.
- Pratt, M. G., K. W. Rockmann, and J. B. Kaufmann (2006). "Constructing Professional Identity: The Role of Work and Identity Learning Cycles in the Customization of Identity among Medical Residents," *Academy of Management Journal* 49(2), 235–262.
- Rae, D. (2004). "Practical Theories from Entrepreneurs' Stories: Discursive Approaches to Entrepreneurial Learning," *Journal of Small Business and Enterprise Development* 11(2), 195–202.
- (2005). "Entrepreneurial Learning: A Narrative-Based Conceptual Model," *Journal of Small Business and Enterprise Development* 12(3), 323–335.
- Rae, D., and M. Carswell (2000). "Using a Life-Story Approach in Researching Entrepreneurial Learning: The Development of a Conceptual Model and Its Implications in the Design of Learning Experiences," *Education and Training* 42(4/5), 220–228.
- Robichaud, Y., R. LeBrasseur, and K. V. Nagarajan (2010). "Necessity and Opportunity-Driven Entrepreneurs in Canada: An Investigation into Their Characteristics and an Appraisal of the Role of Gender," *The Journal of Applied Business and Economics* 11(1), 59–79.
- Roper, J., and G. Cheney (2005). "Leadership, Learning and Human Resource Management: The Meaning of Social Entrepreneurship Today," *Corporate Government* 5(3), 95–104.
- Schwartz, S. H. (2005). "Basic Human Values: An Overview," *Jerusalem: Hebrew University*.
- Schwartz, S. H., G. Melech, A. Lehmann, S. Burgess, M. Harris, and V. Owens (2009). "Extending the Cross-Cultural Validity of the Theory of Basic Human Values with a Different Method of Measurement," *Journal of Cross-Cultural Psychology* 32(5), 519–542.
- Senor, D., and S. Singer (2009). *Start-Up Nation: The Story of Israel's Economic Miracle*. New York: Twelve.
- Senyard, J., T. Baker, P. Steffens, and P. Davidsson (2013). "Bricolage as a Path to Innovativeness for Resource-Constrained New Firms," *Journal of Product Innovation Management* 31(2), 211–230. accessed online October 11, 2013.
- Shane, S. (2000). "Prior Knowledge and the Discovery of Entrepreneurial Opportunities," *Organization Science* 11(4), 448–469.
- Shane, S., and S. Venkataraman (2000). "The Promise of Entrepreneurship as a Field of Research," *Academy of Management Review* 25(1), 217–226.
- Shane, S., E. A. Locke, and C. J. Collins (2003). "Entrepreneurial Motivation," *Human Resource Management Review* 13, 257–279.
- Shaw, E., and S. Carter (2007). "Social Entrepreneurship: Theoretical Antecedents and Empirical Analysis of Entrepreneurial Processes and Outcomes," *Journal of Small Business and Enterprise Development* 14(3), 418–434.
- Short, J. C., T. W. Moss, and G. T. Lumpkin (2009). "Research in Social Entrepreneurship: Past Contributions and Future Opportunities," *Strategic Entrepreneurship Journal* 3(2), 161–194.
- Smith, B. R., C. H. Matthews, and M. T. Schenkel (2009). "Differences in Entrepreneurial Opportunities: The Role of Tacitness and Codification in Opportunity Identification," *Journal of Small Business Management* 47(1), 38–57.
- Stevenson, H. H., and D. Gumpert (1985). "The Heart of Entrepreneurship," *Harvard Business Review* March–April, 85–94.
- Strauss, A., and J. Corbin (1994). "Grounded Theory Methodology," in *Handbook of Qualitative Research*. Eds. N. K. Denzin and Y. S. Lincoln. Thousand Oaks, CA: Sage, 273–285.
- Sullivan Mort, G., J. Weerawardena, and K. Carnegie (2003). "Social Entrepreneurship: Toward Conceptualization," *International Journal of Nonprofit and Voluntary Sector Marketing* 8(1), 76–88.
- Thompson, J., G. Alvy, and A. Lees (2000). "Social Entrepreneurship: A New Look at the People and the Potential," *Management Decision* 38(5), 328–338.

- Weber, M. (1958). *The Protestant Ethic and the Spirit of Capitalism*. New York: Scribner.
- Weick, K. E., K. M. Sutcliffe, and D. Obstfeld (2005). "Organizing and the Process of Sensemaking," *Organization Science* 16(4), 409–421.
- Wrzesniewski, A., C. McCauley, P. Rozin, and B. Schwartz (1997). "Jobs, Careers, and Callings: People's Relations to Their Work," *Journal of Research and Personality* 31, 21–33.
- Yitshaki, R., and F. Kropp (2011). "Becoming a Social Entrepreneur: Understanding Motivations Using Life Story Analysis," *International Journal of Business and Globalisation* 7(3), 319–331.
- Zahra, S. A., E. Gedajlovic, D. E. Neubaum, and J. E. Shulman (2009). "A Typology of Social Entrepreneurs: Motives, Search Processes and Ethical Challenges," *Journal of Business Venturing* 24, 519–532.

The Effect of Customer Orientation on Smaller Sized Service Firms and on the Market: A Multilevel Application Embracing Firms and Customers

by Ana Isabel Polo Peña, Dolores María Frías Jamilena,
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The aim of the present work is to ascertain the importance of customer orientation as a business strategy within the smaller services sector. The adoption of customer orientation is measured from the firm's point of view, and its effect on financial performance is analyzed. Customer perception is analyzed, using two variables, perceived value and loyalty. The sample consists of 100 Spanish rural tourism enterprises and 572 customers. The findings reveal that customer orientation has a direct effect on perceived value, and perceived value has a direct effect on loyalty toward the firm. Furthermore, customer orientation contributes to the achievement of financial performance.

Introduction

According to the Office for Official publications of the European Community (2006), the service sector in Europe is a very important sector of the European economy and is a growing area, attracting increased political and economic interest as a current and future driver for growth. In 2005, it represented 70 percent of the added production value in the European Union and had shown positive growth rates and has been very important in the job creation goal. In this sector, 90 percent of the firms are small and micro-sized firms (referred in the present work as smaller service firms [SSFs]).

A successful strategy for service companies is the delivery of superior value to customers

(Siu, Zhu, and Kirby 2003). Increased value to customers is continuously and systematically developed through the adoption of customer orientation (CO); indeed, this is considered as being equivalent to the development of a competitive advantage for the organization (Deshpandé, Farley, and Webster 1993).

CO involves permanently orientating the firm toward the creation and delivery of superior value for its customers (Deshpandé, Farley, and Webster 1993). The adoption of CO constitutes a strategy that can provide a competitive advantage for firms, in so far as it can have a positive effect on consumer behavior, it can impact on key consumer behaviors such as perceived value (PV) and loyalty, and ultimately it can translate into better financial performance (FP) (Slater and Narver 1994). It is therefore of interest to

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examine the actual mechanisms by which CO contributes to this increased customer loyalty, considering a key antecedent of loyalty in the form of the variable PV.

These positive benefits have led to the development of numerous works in the literature that, taking the firm's perspective, evaluate the effect of CO on consumer behavior (e.g., Camarero 2007; Voon 2006) and on the achievement of firms' FP (e.g., Davis et al. 2010; Tajeddini 2010).

Nonetheless, it has to be borne in mind that there are aspects that require further attention in the literature and that are essential for broadening the knowledge base in this area.

One such aspect is the fact that evaluation of the positive effects of CO adoption requires a joint perspective that takes into account the perspective of both the firm and its customers. This joint perspective can provide a more complete picture when evaluating whether indeed CO constitutes a strategy that maximizes the value of the offer delivered to customers while helping to achieve improved performance on the part of the firm. A firm should be considered as customer oriented only when its customers actually perceive it. Hence, in order to evaluate the effects of CO adoption on consumer behavior, as well as the firm's internal perspective on CO and its impact on FP, the customer perspective must also be taken into account. From this, their perception and evaluation of the firm's offer can be identified.

With the exception of the works of Barroso, Martín-Armario, and Sánchez (2005), Deshpandé, Farley, and Webster (2000), and Steinman, Deshpandé, and Farley (2000), the literature to date has not jointly considered the internal perspective of the firm together with that of its customers when evaluating the effect of CO adoption on consumer behavior. The works of Deshpandé, Farley, and Webster (2000) and Steinman, Deshpandé, and Farley (2000) are applied in an industrial context, which differs greatly from that of the SSF sector. The work of Barroso, Martín-Armario, and Sánchez (2005) is applied in the service sector and measures the effect of a firm's CO (based on its internal perspective) on service quality and satisfaction (based on the perspective of customers). Although the work of Barroso, Martín-Armario, and Sánchez (2005) makes an extremely valuable contribution, more extensive research into the effects of CO adoption on consumer behavior is necessary.

In particular, the study of a firm's actions (in this case, the adoption of CO) on consumer behavior requires the use of a dyadic business-to-customer (B2C) perspective, embracing both the firm and its customers. In using a B2C sample, its hierarchical structure must be acknowledged and a multilevel analysis must be applied (Bryk and Raudenbush 1992). In the work of Barroso, Martín-Armario, and Sánchez (2005), a B2C is used, but the hierarchical structure of the sample is not recognized, and nor is a multilevel methodology applied, which raises questions regarding the accuracy of the results. This highlights the need to take both aspects into account—the hierarchical nature of the sample and the use of a multilevel methodology—when estimating the effect on CO adoption on consumer behavior (Heck and Thomas 2009, pp. 19–20).

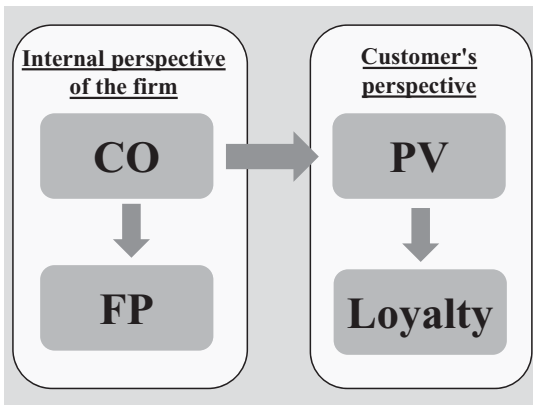
In light of the above, the aims of the present work focus on determining whether CO adoption constitutes a strategy of benefit to customers (derived from their own perception of whether they are being presented with an offer of greater value) and to the firm (derived from whether CO contributes to achieving higher levels of customer loyalty and improved FP), combining both perspectives and applying an appropriate multilevel methodology whose structure is hierarchical. More specifically, the objectives of the present study are: (1) to measure the firm's adoption of CO and the FP achieved in the SSFs, from the firm's internal perspective; (2) to measure the customer loyalty achieved using the variable PV—a key antecedent of loyalty—from the customer's perspective; and (3) to propose a model that determines the effects of CO adoption on the firm's performance, examining the effect of CO adoption on FP, and on the process of loyalty formation on the part of the customer, on the basis of the antecedent PV.

The study is of interest for the literature given jointly considers the effect of CO adoption on both firms and their customers, from the perspective of both (Figure 1) with a view to establishing whether CO adoption constitutes a competitive advantage for smaller service firms.

Conceptual Framework **CO in the SSFs**

In the main, the concept of market orientation has been considered from two perspectives: (1) a cultural perspective: market

Figure 1
Conceptual Framework



orientation as part of “organizational culture”— permanently orientating the company toward the creation and delivery of superior value for its customers (Narver and Slater 1990); and (2) a behavioral perspective: the organization-wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organization-wide responsiveness to it (Kohli and Jaworski 1990). These two perspectives have been pioneering in the development of the market orientation concept as a construct with several components.

Subsequently, Deshpandé, Farley, and Webster (1993, p. 27) developed a fresh approach that integrated both of these previous perspectives, known as CO. This is defined as “the set of beliefs which place the customer’s interests first, without excluding those of other publics such as owners, managers, and employees with the aim of making the organization profitable in the long term.” Deshpandé and Farley (1998) undertake a comparative analysis of the measurement instruments proposed by Deshpandé, Farley, and Webster (1993), Kohli and Jaworski (1990), and Narver and Slater (1990). On the basis of this analysis, the scale proposed by Deshpandé, Farley, and Webster (1993) was found to be valid for application in different contexts.

Their scale focuses on the client and on interfunctional coordination. CO cannot be limited to processing information on customers’ needs; it requires interfunctional mechanisms

to manage that information and translate it into specific action. In this sense, CO must revolve around a set of values and beliefs that are deeply rooted in the organizational culture. Usually, this refers to an organizational culture that stresses the customer as the focal point of strategic planning and execution. Thus, CO is understood as a set of activities, behaviors and processes, all of which are related to ongoing evaluation and a focus on client needs (Deshpandé and Farley 1996, 1998). Indeed the considerable emphasis of the scale developed by Deshpandé, Farley, and Webster (1993) on the customer is fundamental in its application in the service sector, where the service delivery process needs to be fully adaptable to client requirements (Steinman, Deshpandé, and Farley 2000).

Development of Hypotheses

Effect of Adopting CO on the Market

The adoption of CO provides the firm with a competitive advantage, in that it helps to secure greater loyalty on the part of the customer (Slater and Narver 1999). When evaluating the effect of CO on loyalty, consideration must be given to those mechanisms that enable customers to perceive and evaluate the actions taken by the firm. It should be remembered that when a firm implements a CO approach, the resulting behaviors that it plans internally may or may not be perceived externally, and therefore valued, by customers.

In the service industry, the PV of the offer presented by a firm is fundamentally related to that firm’s intangible assets (Kaplan and Norton 2001); thus, when the customer is highly committed to the service delivery process, it is necessary for the firm to develop close relationships with the customer. This relationship increases the customer PV, and consequently such a relationship must be encouraged by the firm’s CO (McNaughton, Osborne, and Imrie 2002).

The CO establishes the bases of creating value for the customer and that this strategy enables the firm to deliver a better performance. However, this argument may be open to question in the service industry, given that the intangibility of services may affect this relationship considerably (McNaughton, Osborne, and Imrie 2002).

There are works that focus specifically on the study of the effect of CO adoption on customers in the service industry. Some of these

works measure the adoption of CO and its effects from the firm's perspectives (e.g., Camarero 2007; Voon 2006; Bennett 2005). The findings reveal that CO has a positive effect on key variables of consumer behavior.

When measuring the effect of CO on consumers, if only the internal perspective of the firm is taken into account, this can skew the results. It may mean that the effect of CO on customers is over-valued, as the delicate mechanisms used by the consumer to evaluate the service offer—the exogenous indicators—have not been factored in. Indeed according to the literature, a firm should only be considered as customer-oriented when its customers actually perceive it to be so. Consequently, the appropriate level of a firm's CO is based on customers' perception, obliging the firm to take on board the customer's perspective (Deshpandé, Farley, and Webster 1993; Steinman, Deshpandé, and Farley 2000).

Other works measure the adoption of CO, and its effects, exclusively from the perspective of the customer (e.g., Corbitt, Thanasankit, and Yi 2003; Mulyanegara 2010). Their findings show that CO has a positive effect on key variables of consumer behavior.

This exclusive focus on the consumer perspective may mean that the effect of CO adoption on consumer behavior is not appropriately measured. It has to be remembered that CO adoption is an approach internal to the firm rather than an explicitly outward-facing activity that customers directly see. Customers only perceive the consequences of CO adoption once they consume the services delivered by the firm. Therefore, the client's vision of a firm's actions does not capture the full scope of activities that the firm actually undertakes when they adopt a CO approach.

Few works have taken a dyadic perspective B2C (Barroso, Martín-Armario, and Sánchez 2005; Deshpandé, Farley, and Webster 2000; Steinman, Deshpandé, and Farley 2000). Those of Deshpandé, Farley, and Webster (2000) and Steinman, Deshpandé, and Farley (2000) do address both the perspective of the firm and that of its customers, but they apply only to industrial markets and focus on the effect of culture and of the type of relationship between firm, supplier, and customer on the adoption of CO.

Finally, the work of Barroso, Martín-Armario, and Sánchez (2005) is applied to the service sector and considers the firm's perspective in

evaluating its adoption of CO, together with the customer's perception in evaluating the effect of CO on their behavior. The results reveal that CO adoption has a direct positive influence on service quality and an indirect positive influence on customer satisfaction.

However, it must be borne in mind that although adopting a CO approach helps the firm deliver an offer of greater value for customers, it also implies greater costs for the firm (Kumar et al. 2011; Tuli, Kohli, and Bharadwaj 2007) that in the end will make an impact on the offer. Therefore, in order to evaluate the true effects of CO adoption on consumer behavior, an approach is required that captures all of the perceptions that customers have when consuming the offer delivered by the firm, including perceived benefits and costs.

The PV construct embraces the customer perspective in terms of the set of elements that comprise the offer, including both the perceived benefits and also the perceived costs. Zeithaml (1988), from the customer's perspective, asserts that the PV "is that which the client 'obtains' (perceived benefits) in relation to that which the client 'gives up' (perceived costs or sacrifices)." In this definition, PV is understood to be a construct made up of two factors—one representing features received and the other representing sacrifices made.

There is strong backing throughout the literature for the theoretical framework proposed by Zeithaml (1988) to address the study of PV; in fact, it is the most widely used framework for applying PV in the service industry (e.g., Baek and King 2011; Edward and Sahadev 2011; Lertwannawir and Gulid 2011).

In summary, a correct evaluation by the consumer of the offer delivered by a firm must include the measurement of: (1) the benefits and sacrifices perceived by the customer, from their point of view; and (2) the CO strategy adopted by the firm, from an internal point of view. In light of the above, it is proposed that

H1: PV for customers is determined by the strategic variable "CO of the SSF."

The literature highlights the importance of the effects of PV on consumer behavior (Petrick 2002; Zeithaml 1988), particularly its positive effects on loyalty (e.g., Baek and King 2011; Edward and Sahadev 2011; Lertwannawir and Gulid 2011).

Loyalty can be considered a multidimensional concept that includes consumer behavior. Among those works that take this view is that of Zeithaml, Berry, and Parasuraman (1996), who identify the customer's behavioral intentions toward the firm. These intentional behaviors are: say positive things of the firm, recommend the firm, remain loyal to the firm, spend more with the firm, and pay a price premium. Of these intentional behaviors, the literature focusing on the study of the effects of PV has given the greatest attention to "intention to recommend" and "intention to repeat purchase with the firm."

The relationship established between PV and loyalty is already acknowledged by the literature. However, this relationship is absolutely central to the present work, the aim being to test whether CO adoption constitutes a strategy capable of giving firms a competitive advantage in so far as it may have a positive effect on consumer behavior and an influence on customer loyalty. Therefore, it is proposed that

H2: PV is an antecedent of customer loyalty.

The Effect of CO Adoption on FP

The literature highlights the fact that adoption of CO improves the FP of firms (e.g., Kennedy, Goolsby, and Arnould 2003; Matanda and Ndubisi 2009) and also in SSFs (Kara, Spillan, and Deshields 2005; Tajeddini 2010; Tajeddini and Trueman 2008).

However, some works applied in the service sector find that CO adoption has no such favorable impact on FP, as is the case in the works such as Sandvik and Sandvik (2003), Noble, Sinha, and Kumar (2002), and Rose and Shoham (2002). These findings may be due to the tremendous effort that service firms have to make in order to implement CO to a suitable level that enables them to develop close relationships with the customer, wherein the customer perceives that they are being given a personalized service of superior value (McNaughton, Osborne, and Imrie 2002). For the service firm, achieving this objective involves directing significant resources toward the customer that may not ultimately be compensated for in terms of sales generated (Kumar et al. 2011). This will then affect the relationship between CO adoption and the firm's FP.

Therefore, despite the extensive literature on the study of the effects of CO on FP, it is of

interest to seek greater empirical evidence as to the effects of CO adoption on FP in the case of SSFs. Hence, it is proposed that

H3: The SSF's adoption of CO has a positive effect on the achievement its FP.

Methodology

Population

Given the research objectives in question, a data-matched sample needed to be developed, covering a dyadic B2C perspective, from a sector that had to have certain characteristics, namely a sector in which:

- (1) a sector that is composed for SSFs. Companies are classified as such using the criteria outlined in the Official European Commission (2003) directive DOCE 96/280/CE, namely that a micro-enterprise has between 1 and 10 employees and a small enterprise employs between 11 and 49 workers;
- (2) CO adoption is considered to be a key sphere of activity within the business strategy, so that the extent of adoption throughout the sector is generalized;
- (3) a high level of contact is achieved between the customer and the firm while services are being delivered. This requirement helps to ensure that the customer has a wider perspective on which to base their evaluation of the activities the firm undertakes in terms of CO; and
- (4) customers are able to choose their level of loyalty to the firm. In other words, there are sectors in which, even when consumers are dissatisfied with the firm, they continue to deal with them as there are no alternatives, or they cannot identify any better offer from competing firm (Bigné, Moliner, and Callarisa 2000a).

For the purpose of our study, one of the economic sector that best represents the scenario described previously is the rural tourism sector. Although there is no universally agreed definition of rural tourism, the definition proposed by Fuentes-García may be used (1995, p. 76): "a tourist activity carried out in a rural environment, made up of an integrated leisure supply, aimed at a demand whose motivation is its contact with the autochthonous surroundings and which is inter-related with the local society." The core service on which this type

of tourism is based is that of the accommodation offer, combined with the other complementary services offered by these enterprises (Hernández-Maestro, Muñoz, and Santos 2007), all of which is largely shaped by the small size of these firms, in which one particular resource of enormous appeal is the delivery of a highly personalized service to the customer (Buhalis and Deimezi 2004; Hernández-Maestro, Muñoz, and Santos 2007).

Firms belonging to the rural tourism sector interact within an extremely competitive market—a fact that necessitates the development of strategic activities normally based on delivering personalized services accompanied by a high level of personal contact with the customer (Hall 2004; Polo-Peña, Frías-Jamilena, and Rodríguez-Molina 2012). It is precisely this kind of customer-focused strategy that contributes significant appeal to the sector. Furthermore, it is a sector currently characterized by a highly discerning public on the demand side, and high levels of competition on the supply side (Polo-Peña and Frías-Jamilena 2010), emphasizing the importance of carrying out activities that contribute to winning customer loyalty in the sector (Bigné, Sánchez, and Sánchez 2000b).

In such a way, this sector fully represents the context considered to be most suitable for the present study and hence it was chosen for use in the empirical study. At the same time, it is also worth noting that as well as the suitability of the rural tourism sector for this particular study, in addition, until now there has been no study undertaken into CO adoption and its effects on the rural tourism sector. This particular application is of interest for the literature given that, in recent years, rural tourism has become an increasingly important asset for the European economy (Buhalis and Deimezi 2004), representing a key tool in achieving sustainable economic development (UNWTO 2007b) and in redistributing demand to form sustainable rural locations (UNWTO 2007a).

Sample

The Spanish national rural tourism population was taken as the basis of the empirical research carried out. Spain is considered one of the most representative and most significant tourist destinations worldwide (UNWTO 2009), in which the rural tourism sector occupies an important position (Spanish Institute of Statistics 2011; Red.es 2007).

The data-matched sample needed to cover both firms and customers. To obtain the data for the study, first the firm's sample was obtained, followed by the customer's sample that was coordinated with the firm's sample.

In selecting the firms sample, Clubrural's database was consulted. Clubrural's database is a leading rural tourism portal in Spain, whose database covers the Spanish national rural tourism offer and includes the particular characteristics of firms (Clubrural 2009). Using this company's data presented a number of advantages over data registered with other organizations, namely:

- (1) This database gives a breakdown that separates out rural tourism firms. Although there is an official body responsible for registering rural tourism firms (the Spanish Institute of Statistics), it registers the offer of the hotel trade as a collective and does not distinguish separately those hotel firms specializing in rural tourism (Spanish Institute of Statistics 2011).
- (2) As well as providing characteristics of the Spanish rural tourism business population, it also gives contact details for these firms, which is an important advantage when undertaking the interviews.
- (3) Clubrural's database is not only detailed but also extensive, providing a register of the rural tourism offer of around 10,000 establishments (Clubrural 2009).

The sample was selected by means of quota sampling as this technique provides a sample structure similar to that of the population, based on its descriptive characteristics. The sample was made up of groups of rural tourism firms and was scoped in line with three variables: location, classification, and category (variables those that exert the greatest influence on the competitive activities undertaken by rural tourism firms—Polo-Peña and Frías-Jamilena 2010). The size of each group was determined by the geographical distribution of the rural tourism firms as defined by the Spanish region. In turn, each group had a number of subgroups that represented the two classifications (hotel and nonhotel) and the categories (higher category and lower category establishments).

Data collection was undertaken by means of telephone surveys with managers of these firms

in the period of March–April 2009. This involved selecting enterprises at random, from within each of the preestablished subgroups, in light of their location, activity, and category.

Finally, a total of 108 surveys were undertaken, 100 of which were found to be valid which, taken as a whole, corresponded with the structure of the national population of rural tourism firms. This scope was similar to, or greater than, that used in other studies that have been carried out on other strategies adopted by firms, such as CO applications among SSFs (e.g., Kara, Spillan, and Deshields 2005; Polo-Peña, Frías-Jamilena, and Rodríguez-Molina 2012).

The second phase consisted of selecting the customer's sample. This was obtained by using the firm's sample previously attained, so that paired data could be established, from both the firm's and the customer's population (as in the work of Barroso, Martín-Armario, and Sánchez 2005; Chen and Quester 2006). In this way, each case consists of one rural tourism establishment and one of its customers. All participating rural tourism establishments were asked to collaborate, by distributing questionnaires randomly among their customers upon leaving their establishment.

The sample was generated by applied quota sampling as this technique provides a sample structure similar to that of the population. Quotas were established in respect of the number of customer to survey in each rural tourism establishment, in light of the volume of tourists visiting each Spanish region. Establishing quotas in line with volumes of tourists visiting each Spanish region meant that a sample representative of demand for rural tourism could be achieved (Frías-Jamilena, Polo-Peña, and Rodríguez-Molina 2010). The field work was carried out in August and September of 2009. In order for this to function well, it was necessary to send periodic reminders to managers of rural tourism establishments and to offer incentives to encourage collaboration (both for the establishments and for tourists) by means of two prize draws—one offering three free inscriptions in a major national Web portal for professionals, and the other offering six rural tourism breaks for tourists.

A total of 572 valid questionnaires from customers was obtained, and these were representative of the structure of the customer population for rural tourism. The average number of customers per firm was just under

six, giving rise to a very similar sample to that used in other studies (Seibert, Silver, and Randolph 2004).

The profile of the respondents corresponded roughly to that of other studies undertaken in rural tourism (Frochot 2005; Hernández-Maestro, Muñoz, and Santos 2009). There was an almost equal number of women (52.10 percent) and men (47.90 percent). Most respondents were either under 29 years of age (43.40 percent) or between 30 and 44 (44.90 percent), and were employed (54.40 percent).

Measures

All measures were drawn from previous research and aligned with the conceptual aspects of each construct.

With regard to the measurement scales used for the study of the firms, to measure CO, the scale of Deshpandé, Farley, and Webster (1993) was adapted. This scale embraces the business culture and the set of behaviors carried out in the firms in terms of customers and interfunctional coordination and the response of the firm towards the market (Appendix 1 shows the set of items used to measure the CO, using a seven-point Likert-type scale, where 1 equaled “totally disagree” and 7 equaled “totally agree”). This scale was confirmed as consistent when used in the context of smaller tourism firms (e.g., Tajeddini 2010; Tajeddini and Trueman 2008), that is, a very similar context to that of our study.

There are numerous works throughout the literature measuring FP. Typically, FP is quantified based on a valuation of three items, namely “sales achieved,” “profits,” and “return on investment,” in relation to the firm's objectives (Kohli and Jaworski 1990), also in SSFs (Kara, Spillan, and Deshields 2005). In line with Davis et al. (2010), who argue that objective (i.e., certifiable by a third-party) relative performance measures were virtually impossible to obtain at the business unit level, subjective measures have also been shown to be correlated to objective measures of performance.

The measurement of the items used was carried out based on the perception of the manager of the activities undertaken in their company and the results achieved. A seven-point Likert scale was used, where 1 equaled “totally disagree” and 7 equaled “totally agree” (Appendix 1).

With regard to the measurement scales used in the customer study, the PV scale was based

on the application proposed by Zeithaml (1988). This application was used in the service industry in the works of Cronin, Brady, and Hult (2000) and of Wang et al. (2004) and in the tourism sector in the work of Gallarza and Gil-Saura (2006).

Loyalty was measured by means of “intention to repeat purchase” and “intention to recommend the firm,” using the scale based on the work of Zeithaml, Berry, and Parasuraman (1996), which has also been applied in studies undertaken in the service industry (such as Petrick, Morais, and Norman 2001) and in the tourism sector (such as Gallarza and Gil-Saura 2006).

The measurement of the items used was carried out according to the perception of the customers based on their dealings with the firm. A seven-point Likert scale was used, where 1 equaled “totally disagree” and 7 equaled “totally agree” (Appendix 2).

Analysis

Structural equation modeling (SEM) is a methodology for analyzing directly observable variables and latent variables (such as CO, FP, PV, and loyalty) that can cover multiple relationships between these variables (Hair et al. 2008, pp. 611–642).

In applying SEM, a particular series of steps is typically followed (Hair et al. 2008, pp. 611–642). First of all, the overall fit of the model must be evaluated, and for this purpose overall fit indices are used, such as the normed chi-square, the comparative fit index (CFI), the Tucker-Lewis Index (TLI) and root mean square of approximation (RMSEA). Next, the validity of the measurement scales is evaluated (in this case relating to the variables CO, FP, PV, and loyalty). To this end, based on the scorings for each item, the compound reliability and variance extracted are calculated. Finally, the structural model is evaluated, taking into account the significance of the parameters.

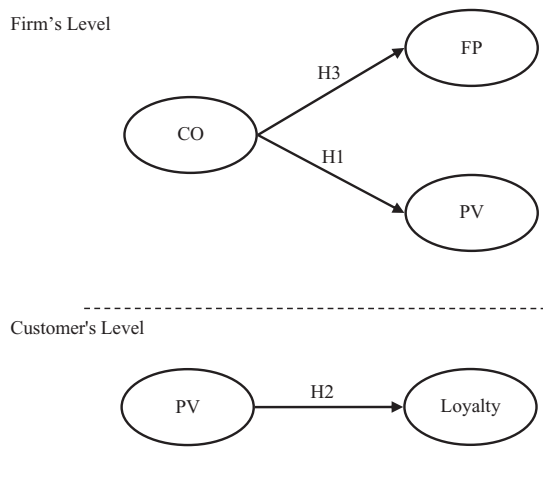
In the present study, there are two nested levels (firms and customers). Using conventional statistical techniques, such as ordinary SEM, would have resulted in unreliable results because customers using the same firm share common influences (e.g., they interacted with the same employees). Therefore, the assumption of independent observations required for ordinary SEM analysis would have been violated (Bryk and Raudenbush 1992). In light of these difficulties, a multilevel SEM was used to

deal with hierarchically nested data structures (Hofmann 1997; Van Dolen et al. 2002). Multi-level SEM techniques are the most appropriate approach because they allow use of customers’ predictors at the individual level and firms’ predictors at the group level, without the shortcomings of the aggregation or disaggregation approaches (Heck and Thomas 2009, pp. 19–20).

Additionally, in the model proposed in Figure 2, the first hypothesis is a cross-level hypothesis because it involves a relationship between CO at the firm level and PV at the customer level. Multilevel SEM is an appropriate approach for testing cross-level models because it allows the analyst to explicitly model both individual level (level 1) and group level (level 2) variance in individual outcomes. The intercept and slope from the level 1 (within-group) analysis serve as the dependent variables in the level 2 (between-groups) analysis. A significant parameter estimate for the level 1 predictor indicates an individual-level effect, and a significant parameter estimate for the level 2 predictor of the level 1 intercepts indicates a group-level effect.

The estimation of the proposed model was carried out using Mplus software and robust maximum likelihood. In the syntax, the items measuring CO and FP were defined as variables of the firm level, or between groups. On the other hand, the variability of PV and loyalty was divided into two parts: that explained by

Figure 2
Proposed Research Model



the differences between customers (within-group) and that explained by the differences between firms (between-groups). To ensure invariance of the PV and loyalty measures, a restricted model was used, in which the factor loadings were fixed so as to be equal between the firm level and the customer level (Heck and Thomas 2009, pp. 111–112). This model can also be conceptualized in terms of a hierarchical random intercept model.

Findings

Evaluating Reliability and Validity of the Scales

The dimensions included in the scales reflect the composition of the scales when their validity and reliability can be confirmed (Devlin, Dong, and Brown 1993). To achieve this, the internal consistency of each one of the dimensions on the first-order scale must be analyzed. Usually, consistency can be measured by means of Cronbach's alpha; however, this ceases to be a valid indicator when dealing with variables whose variability is divided into two parts: that explained by the differences between customers (within-group) and that explained by the differences between firms (between-groups). In such cases, a valid approximation to measure internal consistency is that used by Hox (2002, p. 168), which recognizes the two parts in which the variability is divided (within-groups and between-groups). Finally, composite reliability and variance extracted provided a better evaluation of internal consistency. Table 1

reflects these indicators. In all cases, the values obtained were acceptable, as they were close to, or above, the reference value of 0.70 for composite reliability and 0.50 in the case of variance extracted (Hair et al. 2008, pp. 649–651).

With regard to the second-order construct, Table 1 shows the composite reliability and variance extracted for loyalty. It can be seen that the loyalty scale offers composite reliability and variance extracted values above the minimum acceptable level, such that, overall, these results contribute to determining that the second-order scale referring to loyalty has a high level of internal consistency.

The results obtained thus far lead to the conclusion that the set of dimensions proposed to measure CO, FP, PV, and loyalty is valid, given that it allows the existence of adequate validity and reliability to be confirmed.

Evaluating the Research Model

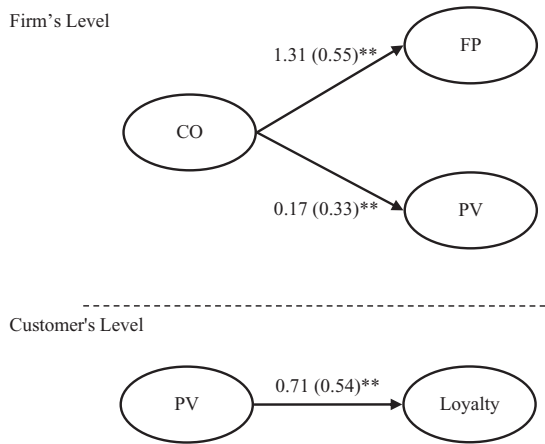
The overall fit of the model was adequate as the global fit indices such as the normed chi-square (1.87), CFI (0.96), TLI (0.95), and RMSEA (0.04) were within the limits recommended by the literature (Figure 3). However, the χ^2 statistic was statistically significant, although it is known to be particularly sensitive to sample size (Hair et al. 2008, pp. 680–681).

The intraclass correlations (indicating the expected correlation between two randomly drawn units that are in the same group) for the items of the variables included in the customer

Table 1
Internal Consistency of Scales Used

Dimension	Alpha (Hox 2002)	Composite Reliability	Variance Extracted
Firm's Level			
	First-order scales		
CO	0.86	0.87	0.43
FP	0.85	0.87	0.71
Customer's Level			
	First-order scales		
PV	0.85	0.85	0.65
Recommendation Intention	0.90	0.90	0.75
Repurchase Intention	0.74	0.75	0.60
	Second-order scale		
Loyalty		0.84	0.73

Figure 3 Outline of Results from the Proposed Research Model



Value: unstandardized coefficient; value in parentheses: standardized coefficient.

**** $p < .01$; goodness-of-fit indicators: CMIN/ $df = 1.87$; RMSEA = 0.04; CFI = 0.96; TLI = 0.95; SRMR within model = 0.011; SRMR between model = 0.082.**

**Table 2
Intraclass Correlations for
Variables of Customer-Level
Constructs**

PV		PV1.	0.27
		PV2.	0.26
		PV3.	0.20
Loyalty	Recommendation Intention	REC1.	0.24
		REC2.	0.20
		REC3.	0.23
	Repurchase Intention	REP1.	0.19
		REP2.	0.17

level reached values of between 0.17 and 0.27 (Table 2). These values indicate that the bias that they can cause, both in the estimation of the parameters and in the standard errors, must be taken into account—as achieved by using multilevel SEM (Hox 2002, p. 184; Muthén 1994).

Returning to the hypotheses, Figure 3 shows the results relating to the relationships between the constructs under consideration. On the basis of these results, the following aspects are to be noted:

- H1 proposed that PV for customers is determined by the strategic variable “CO of the SSF.” The results show a statistically significant relationship ($p < .01$). Furthermore, the effect detected stands at 0.17, with a standardized coefficient of 0.33. Therefore, there is statistical support for this hypothesis, and it can be concluded that PV for customers is indeed determined by the strategic variable “CO.”
- H2 alluded to the relationship between PV and loyalty. The results show a statistically significant relationship ($p < .01$). The effect detected stands at 0.71, with standardized coefficients of 0.54. Therefore, there is empirical support for H2. It can be concluded that PV is an antecedent of customer loyalty.
- H3 proposed that CO has a significant positive effect on the achievement of FP. The results show a statistically significant relationship ($p < .01$). The effect detected stands at 1.31, with a standardized coefficient of 0.54. Therefore, there is statistical support for this hypothesis, and it can be concluded that CO adoption contributes to the achievement of FP.

Conclusions, Managerial Implications, Limitations, and Future Lines of Research Contributions to the Literature

The present work, which jointly reflects the perspective of firms and customers, involves: (1) measurement of CO adoption and of the achievement of FP, as viewed from the internal perspective of the firm, and its effects on customers, from the customers' own perspective; (2) a multilevel analysis, considering the nested structure of the matched sample of firms and customers.

In light of the above, one major contribution of the present study is in establishing that CO adoption constitutes a suitable strategy for SSFs to compete in the market. The work explores the mechanisms by which CO adoption is perceived and valued by customers, and which will ultimately affect their behavior. This

involved considering the customer's perceptions and evaluations when they consume the offer delivered by the firm, taking into account the perceived benefits and costs, as expressed in the construct PV. The findings achieved show that CO adoption constitutes a strategy that is orientated toward the systematic delivery of an offer of enhanced value for customers and that helps to generate greater customer loyalty toward the firm.

It is also worth highlighting that the present dyadic B2C study has made it possible to measure the effects of CO on customers in a more realistic way, giving the results achieved greater value. The relationships identified between CO adoption and consumer behavior constitute a discovery of great interest for the literature, given that CO is an approach internal to the firm rather than an explicitly outward-facing activity that customers directly see. Customers only perceive the consequences of CO adoption once they consume the services delivered by the firm.

Another important contribution of the present study is in establishing that CO adoption is an appropriate internal strategy for SSFs, thanks to its contribution to FP. Though the previous literature recognizes the positive effect of CO adoption on FP, in the specific case of service firms this has been questioned, given that the costs the firm must assume in adopting a CO approach may not be compensated in terms of additional income generated. The present work considers the effect of CO adoption on the achievement of FP and finds empirical support for this relationship.

Managerial Implications

CO sets forth the essential guidelines to be established in the firm at an operational level, increasing the efficiency and effectiveness of its marketing actions. First, CO adoption constitutes a strategy that contributes to delivering an offer deemed by customers to be of greater value and that helps to generate greater customer loyalty toward the firm in question. To achieve this, the firm may undertake the following activities:

- (1) develop a greater level of customer commitment to the service process. As shown previously, competitive advantage in the service industry is fundamentally related to intangible assets. For this reason, it is necessary for the firm to develop close

relationships with its customers and increase PV among them. Findings confirm that the firm's CO encourages this relationship. CO adoption has a direct impact on PV, as does PV on customer loyalty;

- (2) increase the level of knowledge of customers' needs and preferences so as to adjust service assets to customer expectations. In order to achieve this, firms that adopt CO appreciate the relevance of using market information in the formulation of their strategies. Therefore, those firms that adopt a CO approach will be focused on the creation and delivery of superior value for their customers, and this should ultimately be perceived and valued by customers, generating greater loyalty toward the firm.

Second, the present study finds that CO adoption constitutes a valuable internal strategy for the SSFs given that it has such a major impact on the achievement of FP. This underlines the importance of coordinating a firm's internal activities toward making the true CO philosophy possible. To achieve this, the firm may undertake the following activities:

- (1) develop a greater capacity for organizational learning. Through constant acquisition of information regarding customers, and the sharing of this information internally, customer-oriented firms are well positioned to develop an "organizational memory," a key ingredient for developing a learning organization;
- (2) develop the use of continuous improvement processes within the firm. The implementation of CO encourages a culture of experimentation and a focus on continuously improving the firm's processes and systems. This implies that developing and improving a firm's CO may make its capabilities become more distinctive in the sector, and this ultimately translates into the achievement of better FRs.

Furthermore, alongside the positive effects of CO adoption on the performance of firm—on customers and on FP—the CO adoption is also beneficial to the customer as they gain access to an offer of greater value. In turn, this constitutes a source of personal satisfaction for

the entrepreneur and all employees. Thus, an important implication for management is the need for greater concern for actions that encourage a suitable organizational climate and behavior that is truly oriented toward the customer.

Limitations and Future Lines of Research

In this work, there are certain limitations that need to be considered and that themselves constitute possible lines of research for the future.

One such limitation is the cross-sectional nature of the study. A longer term study would have enabled us to observe with more precision the effects of CO adoption on the performance of SSFs. More specifically, using longitudinal data would have allowed us to assess whether the effect of CO adoption on consumer behavior (using the variables of PV and loyalty) has an effect on the achievement of FP. The literature establishes that a higher level of loyalty on the part of the consumer leads to improved business results (derived from the customer's stronger intention to repurchase and to recommend the firm). However, given the cross-sectional nature of the sample used in the present study, it was not possible to test this relationship, given that measuring consumer behavior at one moment in time (which can ultimately only represent behavioral intentions) does not allow the FR achieved by the firm in that moment to be explained (i.e., FP that has been achieved thanks to actions taken by the firm). This analysis of the relationship between loyalty and FP would make for an extremely interesting study in the future, based on longitudinal dyadic B2C data.

A further limitation is that imposed by the variables included in the research model. Specifically, it would be of interest to incorporate other variables that have been included in studies on the application of CO and that can affect its adoption—for example entrepreneurial orientation, or different characteristics of the firm—and to analyze whether these have any effect (moderating or mediating) on the relationship between CO adoption and its effects on FP and on customers in the SSFs. Therefore, a future line of research might be to include a greater number of variables relating to the adoption of CO in SSFs and other moderating or mediating variables in the relationship between CO adoption and its effects.

Another possible line of research of interest is to propose a model whose main aim focuses more on the predictive capacity of PV, FP, and loyalty, rather than its explicative capacity (the latter being the focus of the present work). To achieve this, together with the research model, it is suggested that methodologies suitable for this purpose be employed, such as partial least squares (PLS).

A further limitation of this work concerns its empirical application in a very specific sphere. It would be of interest to apply the proposed research model to other sectors of the economy, which would provide greater generalizability of the results achieved.

Another limitation of this work lies in its geographical scope of application. Despite the choice of a geographical area with an extremely strong presence of the type of firm under study, with regard to maximizing the representativeness of the results obtained, the application of this research model may lead to different conclusions if applied to other geographical areas. Therefore, a future line of research potentially of interest is the application of the proposed research model to other geographical areas, in order to achieve results offering even greater generalizability.

References

- Baek, T. H., and K. W. King (2011). "Exploring the Consequences of Brand Credibility in Services," *Journal of Services Marketing* 25(4), 260–272.
- Barroso, C., E. Martín-Armario, and M. E. Sánchez (2005). "Consequences of Market Orientation for Customer and Employees," *European Journal of Marketing* 39(5), 646–673.
- Bennett, R. (2005). "Competitive Environment, Market Orientation, and the Use of Relational Approaches to the Marketing of Charity Beneficiary Services," *Journal of Services Marketing* 19(7), 453–469.
- Bigné, J. E., M. A. Moliner, and L. J. Callarisa (2000a). "El Valor y la Fidelización de Clientes: Propuesta de Modelo Dinámico de Comportamiento," *Revista Europea de Dirección y Economía de la Empresa* 9(3), 65–78.
- Bigné, J. E., M. I. Sánchez, and J. Sánchez (2000b). "Tourism Image, Evaluation Variables and Alter Purchase Behavior: Inter-Relationship," *Tourism Management* 22, 607–623.

- Bryk, A. S., and S. W. Raudenbush (1992). *Hierarchical Linear Models: Applications and Data Analysis Methods*. Newbury Park, CA: Sage Publications.
- Buhalis, D., and O. Deimezi (2004). "E-Tourism Developments in Greece: Information Communication Technologies Adoption for the Strategic Management of the Greek Tourism Industry," *Tourism and Hospitality Research* 5(2), 103–131.
- Camarero, C. (2007). "Relationship Orientation or Service Quality? What Is the Trigger of Performance in Financial and Insurance Services?," *The International Journal of Bank Marketing* 25(6), 406–426.
- Chen, S. C., and P. G. Quester (2006). "Modeling Store Loyalty: Perceived Value in Market Orientation Practice," *The Journal of Services Marketing* 20(2), 188–198.
- Clubrural. (2009). Clubrural, Available at <http://www.clubrural.com> (accessed 08 May 2009).
- Corbitt, B. J., T. Thanasankit, and H. Yi (2003). "Trust and E-Commerce: A Study of Consumer Perceptions," *Electronic Commerce Research and Applications* 2(3), 203–215.
- Cronin, J. J., Jr., M. K. Brady, and G. T. M. Hult (2000). "Assessing the Effects of Quality, Value, and Customer Satisfaction on Customer Behavioral Intentions in Service Environments," *Journal of Retailing* 76(2), 193–218.
- Davis, P. S., E. Babakus, P. D. Englis, and T. Pett (2010). "The Influence of CEO Gender on Market Orientation and Performance in Service Small and Medium-Sized Service Businesses," *Journal of Small Business Management* 48, 475–496.
- Deshpandé, R., and J. U. Farley (1998). "Measuring Market Orientation: Generalization and Synthesis," *Journal of Market-Focused Management* 2(3), 213–232.
- Deshpandé, R., J. U. Farley, and F. E. Webster, Jr. (1993). "Corporate Culture, Customer Orientation, and Innovativeness in Japanese Firms: A Quardard Analysis," *Journal of Marketing* 57(1), 23–38.
- (2000). "Triad Lessons: Generalizing Results on High Performance Firms in Five Business-to-Business Markets," *International Journal of Research in Marketing* 17(4), 353–362.
- Devlin, S. J., H. K. Dong, and M. Brown (1993). "Selecting a Scale for Measuring Quality," *Marketing Research: A Magazine of Management and Applications* 5(3), 12–17.
- Edward, M., and S. Sahadev (2011). "Role of Switching Costs in the Service Quality, Perceived Value, Customer Satisfaction and Customer Retention Linkage," *Asia Pacific Journal of Marketing and Logistics* 23(3), 327–345.
- Frías-Jamilena, D. M., A. I. Polo-Peña, and M. A. Rodríguez-Molina (2010). "The measurement of the rural tourist overall experience through perceived value," 39th European Marketing Academy Conference, EMAC.Copenhagen, Denmark, 01–04 June.
- Frochot, I. (2005). "Segmentation of Tourists in Rural Areas: A Scottish Perspective," *Tourism Management* 26, 335–346.
- Fuentes-García, R. (1995). *El turismo Rural en España. Especial Referencia al Análisis de la Demanda*. Madrid (Spain): Ministerio de Comercio y Turismo, Secretaría General de Turismo.
- Gallarza, M., and I. Gil-Saura (2006). "Value Dimensions, Perceived Value, Satisfaction and Loyalty: An Investigation of University Students' Travel Behaviour," *Tourism Management* 27(3), 437–452.
- Hair, J. F., R. E. Anderson, R. L. Tatham, and B. W. C. Black (2008). *AnálisisMultivariante*, 5th ed. Madrid: Prentice Hall.
- Hall, D. (2004). "Rural Tourism Development in South-Eastern Europe: Transition and Search for Sustainability," *The International Journal of Tourism Research* 6(3), 165–176.
- Heck, R. H., and S. L. Thomas (2009). *An Introduction to Multilevel Modeling Techniques*, 2nd ed. UK: Routledge Taylor & Francis Group.
- Hernández-Maestro, R. M., P. A. Muñoz, and L. Santos (2007). "The Moderating Role of Familiarity in Rural Tourism in Spain," *Tourism Management* 28, 951–964.
- (2009). "Small-Business Owners' Knowledge and Rural Tourism Establishment Performance in Spain," *Tourism Management* 48(1), 58–77.
- Hofmann, D. A. (1997). "An Overview of the Logic and Rationale of Hierarchical Linear Models," *Journal of Management* 23(6), 723–744.
- Hox, J. (2002). *Multilevel Analysis. Techniques and Application*. London: Lawrence Erlbaum Associates, Publishers.
- Kaplan, R. S., and D. P. Norton (2001). *The Strategy-Focused Organisation: How Balanced Scorecard Companies Thrive in the*

- New Business Environment*. Boston, MA: Harvard Business School Press.
- Kara, A., J. E. Spillan, and O. W. Deshields, Jr. (2005). "The Effect of a Market Orientation on Business Performance: A Study of Small-Sized Service Retailers Using MARKOR Scale," *Journal of Small Business Management* 43(2), 105–129.
- Kennedy, K. N., J. R. Goolsby, and E. J. Arnould (2003). "Implementing a Customer Orientation: Extension of Theory and Application," *Journal of Marketing* 67(4), 67–81.
- Kohli, A. K., and B. J. Jaworski (1990). "Market Orientation: The Construct, Research Propositions and Managerial Implication," *Journal of Marketing* 54, 1–18.
- Kumar, V., E. Jones, R. Venkatesan, and R. P. Leone (2011). "Is Market Orientation a Source of Sustainable Competitive Advantage or Simply the Cost of Competing?," *Journal of Marketing* 75(January), 16–30.
- Lertwannawir, A., and N. Gulid (2011). "International Tourists' Service Quality Perception and Behavioral Loyalty Toward Medical Tourism in Bangkok Metropolitan Area," *The Journal of Applied Business Research* 27(3), 1–11.
- McNaughton, R. B., P. Osborne, and B. C. Imrie (2002). "Market-Oriented Value Creation in Service Firms," *European Journal of Marketing* 36(9/10), 990–1002.
- Matanda, M. J., and N. O. Ndubisi (2009). "Market Orientation, Supplier Perceived Value and Business Performance of SMEs in a Sub-Saharan African Nation," *Journal of Enterprise Information Management* 22(4), 384–407.
- Mulyanegara, R. C. (2010). "Market Orientation and Brand Orientation from Customer Perspective an Empirical Examination in the Non-Profit Sector," *International Journal of Business and Management* 5(7), 14–23.
- Muthén, B. O. (1994). "Multilevel Covariance Structure Analysis," *Sociological Methods and Research* 22, 376–398.
- Narver, J. C., and S. F. Slater (1990). "The Effect of a Market Orientation on Business Profitability," *Journal of Marketing* 54, 20–35.
- Noble, C. H., R. K. Sinha, and A. Kumar (2002). "Market Orientation and Alternative Strategic Orientations: A Longitudinal Assessment of Performance Implications," *Journal of Marketing* 66(4), 25–39.
- Office for Official Publications of the European Communities (2006). Key figures on European business. With a special feature sections on SMEs. European Commission. Available at <http://europa.eu> (accessed 04 Jun 2009).
- Official European Commission (2003). Comisión Oficial Europea DOCE 96/280/CE, Diario Oficial de la Unión Europea, 20.5.03. Available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:124:0036:0041:ES:PDF> (accessed 17 May 2009).
- Petrick, J. F. (2002). "Development of a Multi-Dimensional Scale for Measuring the Perceived Value of a Service," *Journal of Leisure Research* 34(2), 119–138.
- Petrick, J. F., D. D. Morais, and W. C. Norman (2001). "An Examination of the Determinants of Entertainment Vacationers' Intentions to Revisit," *Journal of Travel Research* 40, 41–48.
- Polo-Peña, A. I., and D. M. Frías-Jamilena (2010). "The Relationship between Business Characteristics and ICT Deployment in the Rural Tourism Sector. The Case of Spain," *The International Journal of Tourism Research* 12(1), 34–48.
- Polo-Peña, A. I., D. M. Frías-Jamilena, and M. A. Rodríguez-Molina (2012). "Marketing Practices in the Spanish Rural Tourism Sector and Their Contribution to Business Outcomes," *Entrepreneurship and Regional Development* 24, 503–521.
- Red.es. Ministry of Industry, Tourism and Commerce of Spain (2007). *Diagnóstico tecnológico del sector de turismo rural*. Spain: Observatorio de las Telecomunicaciones y de la Sociedad de la Información Entidad Pública Empresarial Red.es.
- Rose, G. M., and A. Shoham (2002). "Export Performance and Market Orientation Establishing an Empirical Link," *Journal of Business Research* 55(3), 217–225.
- Sandvik, I. L., and K. Sandvik (2003). "The Impact of Market Orientation on Product Innovativeness and Business Performance," *International Journal of Research in Marketing* 20(4), 355–376.
- Seibert, S. E., S. R. Silver, and W. A. Randolph (2004). "Taking Empowerment to the Next Level: A Multiple-Level Model of Empowerment, Performance, and Satisfaction," *Academy of Management Journal* 47(3), 332–349.
- Siu, W., Y. Zhu, and D. A. Kirby (2003). "The Interplay of Environment and Culture in Small Firm Marketing: A Comparative Study

- of the Marketing Practices of Chinese Small Firms in Hong Kong and the UK," *Journal of Small Business and Enterprise Development* 10(1), 25–40.
- Slater, S. F., and J. C. Narver (1994). "Market Orientation, Customer Value, and Superior Performance," *Business Horizons* 37(2), 22–28.
- (1999). "Research Notes and Communications Market-Oriented is More Than Being Customer-Led," *Strategic Management Journal* 20, 1165–1168.
- Spanish Institute of Statistics (2011). Encuesta de ocupación en alojamientos de turismo rural. Available at <http://www.ine.es/jaxi/menu.do?L=0&type=pcaxis&path=%2Ft11%2Ffe162eotr&file=inebase> (accessed 06 May 2011).
- Steinman, C., R. Deshpandé, and J. U. Farley (2000). "Beyond Market Orientation: When Customers and Suppliers Disagree," *Journal of the Academy of Marketing Science* 28(1), 109–119.
- Tajeddini, K. (2010). "Effect of Customer Orientation and Entrepreneurial Orientation on Innovativeness: Evidence from the Hotel Industry in Switzerland," *Tourism Management* 31(2), 221–231.
- Tajeddini, K., and M. Trueman (2008). "Effect of Customer Orientation and Innovativeness on Business Performance: A Study of Small-Sized Service Retailers," *International Journal of Entrepreneurship and Small Business* 6(2), 280–295.
- Tuli, K. R., A. K. Kohli, and S. G. Bharadwaj (2007). "Rethinking Customer Solutions: From Product Bundles to Relational Processes," *Journal of Marketing* 71(July), 1–17.
- UNWTO, United Nations World Tourism Organization (2007a). Barómetro OMT del turismo mundial, Vol. 5, no. 1. Available at http://www.unwto.org/facts/eng/pdf/barometer/UNWTO_Barom07_1_sp_excerpt.pdf (accessed 16 June 2008).
- (2007b). El turismo contribuirá a dar solución a los retos del cambio climático y la pobreza, retos que deben abordarse de forma holística. Available at http://www.unwto.org/newsroom/news/sp/press_det.php?id=623 (accessed 16 June 2008).
- (2009). Barómetro OMT del Turismo Mundial, 6(3). Available at http://www.unwto.org/facts/eng/pdf/barometer/UNWTO_Barom08_3_sp_LR.pdf.
- Van Dolen, W., J. Lemmink, K. de Kuyter, and A. de Jong (2002). "Customer-Sales Employee Encounters: A Dyadic Perspective," *Journal of Retailing* 78, 265–279.
- Voon, B. H. (2006). "Linking a Service-Driven Market Orientation to Service Quality," *Managing Service Quality* 16(6), 595–619.
- Wang, Y., H. P. Lo, R. Chi, and Y. Yang (2004). "An Integrated Framework for Customer Value and Customer-Relationship-Management Performance: A Customer-Based Perspective from China," *Managing Service Quality* 14(2/3), 169–182.
- Zeithaml, V. (1988). "Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence," *Journal of Marketing* 52(3), 2–22.
- Zeithaml, V., L. Berry, and A. Parasuraman (1996). "The Behavioral Consequences of Service Quality," *Journal of Marketing* 60(2), 31–47.

Appendix 1

Questionnaire of Firms

1. With respect to management performed in your firm, answer the following questions by checking the box that best reflects your opinion.

In this business . . .

- CO1. We have routine or regular measures of customer service.
- CO2. Our product and service development is based on good market and customer information.
- CO3. We know our competitors well.
- CO4. We have a good sense of how our customers value our products and services.
- CO5. We are more customer-focused than our competitors.
- CO6. We compete primarily based on product or service differentiation.
- CO7. The customer's interest should always come first, ahead of the owners'.
- CO8. Our products/services are the best in the business.
- CO9. I believe this business exists primarily to serve customers

2. Indicate the degree to which each objective has been reached in the last three years

- FINA1. Sales.
 - FINA2. Profits.
 - FINA3. ROI (rate of return on investment).
-

Appendix 2

Questionnaire of Customers

With respect to the service you received from the service retailer, please answer the following questions by ticking the box that best reflects your opinion.

Perceived Value

- PV1. Overall, the value of this **retailer's** services has been adequate.
- PV2. On balance, the trade-off between what I have had to sacrifice to have this experience, and the benefits I have received from the **retailer's** services, has been fair.
- PV3. Compared to what I have had to give up, the service I have received from the **service retailer** has satisfied my wants and needs adequately.

Loyalty

Recommendation intention

- REC1. Speak positively about the **service retailer** to others.
- REC2. Recommend the **service retailer** to friends and family.
- REC3. Encourage my family and friends to visit the **service retailer**.

Re-purchase intention

- REP1. I will purchase from this **service retailer** again in the future.
 - REP2. I will consider this same **service retailer** as my number one option if I decide to purchase this type of service again.
-

Unpacking Coordination Benefits in Supply Networks: Findings from Manufacturing SMEs

by Irene Petrick, Carleen Maitland, and Nicolai Pogrebnjakov

This paper examines how coordination among firms in supply networks generates benefits in the short and long terms for firms. It focuses on information technology (IT) and process improvement coordination. Analysis was performed on quantitative and qualitative data from a sample of SMEs in plastics manufacturing in Pennsylvania. Results indicate that coordination on both IT and process improvement leads to short- and long-term benefits. These relationships were mediated by the adoption of innovations (when coordinating on IT) and access to new capabilities (in process improvement coordination). These results extend the understanding of how participation in supply networks benefits individual firms.

Introduction

Increasing product complexity decreases the likelihood of a single firm possessing the knowledge base and production capability needed to design, manufacture and distribute most products and services (Isik 2011). Instead, suppliers within networks add value to one another's activities, eventually creating a differentiated product or service, together with its underlying network of suppliers. This results in competition between networks rather than individual firms (De Souza, Zice, and Chaoyang 2000; Kumar 2001).

Production networks focused on production of goods and services are important industrial structures, having implications for the competitiveness of firms and industries. For industries, the effectiveness of their component networks determines, in part, their

overall competitiveness both internationally as well as against competing technologies. For individual firms, understanding the effectiveness of their own and other networks can aid in strategic management and help position them appropriately within the industry (Gardet and Fraiha 2012). In addition, effectiveness in the supply chain in one industry sector can afford improved effectiveness in other sectors to which the firm supplies.

Naturally, this begs the question of what is meant by an effective network. Individually, firm effectiveness can be equated with meeting goals; however, in large networks, it is difficult to pin down which firms' goals are pursued. Also, as suggested by Powell, Koput, and Smith-Doerr (1996), firms join networks to pursue both collective and individual goals. Here, we examine network effectiveness from the member firm perspective.

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Even so, given the heterogeneity of firms in a large production network, effectiveness can have a variety of meanings. One firm may assess network effectiveness from a production perspective, focusing on how quickly goods move from supplier to customer or whether flexibility in production across the network is well managed (De Souza, Zice, and Chaoyang 2000). Alternatively, network effectiveness may be viewed from a purely financial perspective, being assessed on the general financial health of the firms in the network or the perception of how well the end product is faring in the consumer market (Venkatraman and Ramanujam 1986).

These differing interpretations suggest effectiveness has different forms, and this research sought to identify a common factor among them. We propose coordination as this common factor. Networked firms coordinate to achieve a variety of objectives, including reducing transaction costs, increasing efficiency and aligning incentives (Barringer and Harrison 2000). Coordination is achieved by various mechanisms such as standardization or mutual adjustment (Alexander 1995) and can be seen as a minimum behavior for improving network performance. However, although it has been acknowledged that coordination among supply network firms benefits both the network and participating firms, specific ways in which coordination leads to benefits have often been overlooked (Cao and Zhang 2011). To address this issue, this paper explores two specific types of coordination and their relationship to performance: coordination on information technology (IT) and coordination on process improvement.

This study is set in the context of small and medium-sized enterprises (SMEs) in the plastics manufacturing industry in Pennsylvania. Empirically, it is a combination of a survey and interviews with selected companies.

Literature Review

Levels of Network Effectiveness

Regardless of a network's function (e.g., supply, R&D, board memberships), its effectiveness can be conceptualized on at least three levels: the overall network, the end customer, or the individual member organization. A challenge for network researchers is that each of these levels has different criteria for evaluating effectiveness (Provan and Milward 2001). At the network level, effectiveness is typically understood as outcomes arising from the func-

tioning of the network as a whole and whose benefits accrue to all members, although not necessarily equally (Provan and Milward 2001). Examples of effectiveness measures for this level include efficient resource management, responsiveness, flexibility and seamless information flows (Beamon 1999; Chen 1997; Souza, Zice, and Chaoyang 2000).

Network effectiveness can also be evaluated from the point of view of the end customer. The customer level differs from the overall network level in that a highly effective network from the perspective of its member firms may have low levels of customer satisfaction. Ensuring both network and customer perspective effectiveness requires communication, as suggested by research on networks of health-care providers (Provan and Milward 2001). In health care, patient care is provided by a network, and its effectiveness is assessed on "overall well-being." Overall network effectiveness can be assessed from the perspective of individual health-care providers but is ultimately tied to the patient or customer perspective.

The third level of network effectiveness is the organizational level. It denotes outcomes arising from the functioning of the network as a whole but with benefits that accrue to individual members (Dyer and Nobeoka 2000; Gronum, Verreyne, and Kastle 2012; Petrick and Pogrebnyakov 2008). In some cases, a network may be highly effective overall; however, individual members may not accrue benefits. This study focuses on effectiveness at this third, organizational level, which is discussed in more detail in the following section.

Firm Benefits from Supply Network Participation

Individual firms can benefit from participating in supply networks in several ways. First, by providing access to external sources of competence, networks improve the ability of firms to innovate (Gronum, Verreyne, and Kastle 2012; Kaufman, Wood, and Theyel 2000; Narula 2004; Pogrebnyakov and Kristensen 2011). Second, firms benefit from network membership through knowledge and technology exchange (Mowery, Oxley, and Silverman 1996); (Dyer and Nobeoka 2000). Third, firms that participate in networks are more likely to survive than those with arm's length market relationships (Uzzi 1996), for example by attaining lower sourcing costs.

Firm-level benefits from network participation can be further divided into short-term, such as enhanced resource acquisition or gains in performance, and long-term ones, which include changes in the way individual firms think or act, as well as structural changes in the firm (Human and Provan 1997; Subramani 2004). More specifically, *short-term benefits* include obtaining access to resources and legitimacy (Borgatti and Foster 2003; Human and Provan 1997; Provan and Milward 2001), reducing firm's exposure to risk and uncertainty (Borgatti and Foster 2003; Lee, Lee, and Pennings 2001) and growth in total sales, number of employees, or market share, which in turn positively relates to profitability (Havnes and Senneseth 2001; Wolff and Pett 2006). Examples of *long-term* benefits are learning and innovation (Borgatti and Foster 2003) and geographic extension of markets (Havnes and Senneseth 2001).

Hence, extensive research has established a range of benefits that firms gain from network membership (Maloni and Benton 1997; Nooteboom 1999; Yu, Yan, and Cheng 2001) and coordinating with other network firms (Cao and Zhang 2011). However, less is known about the particular activities within networks that generate these benefits. One factor that appears to be linked to both short-term and long-term benefits is the level of interaction between firms in the network (Chan and Chan 2010). For example, it is likely that firms that work more closely together have greater access to each other's resources (short-term benefits) and also are more likely to learn from one another (long-term). One way to conceptualize this level of interaction is as interorganizational coordination.

It is as yet unclear whether networks help firms obtain both short-term and long-term benefits, or only short-term ones. According to one position, there is no evidence of short-term benefits, such as growth in employment or total sales, resulting from network activities (Havnes and Senneseth 2001). Another view suggests that networks help firms obtain both short-term and long-term benefits, with short-term benefits being similar across networks and long-term ones differing across networks (Human and Provan 1997). However, the view that long-term benefits indeed occur as a result of participating in a network appears to be consistent throughout the literature.

Hence, conceptualizations of network effectiveness will vary with levels, and here, our interest is in the firm-level perspective. A focus on firm-level network effectiveness can help identify some of the mechanisms by which the benefits of network membership, and in turn its overall effectiveness, accrue.

Coordination

Coordination at the most basic level is management of interdependencies between activities (Alexander 1995; Malone and Crowston 1994; Thompson 1967). Coordination in supply networks encompasses multiple forms of relationships between customers and suppliers with different degrees of formality and longevity. Coordination can be practiced in formal and short-term relationships (Kraul and Streeter 1995; Raposo and Fuks 2002; Stephenson 2005), or in longer-lasting relationships with greater amounts of trust and pooled resources (Powell, Koput, and Smith-Doerr 1996; Raposo and Fuks 2002). These longer-lasting relationships are variously labeled as "cooperation" or "collaboration," and in practice, the labels are often used interchangeably. In this paper, we use the term coordination.

Coordination is often divided into operational and strategic types (den Hengst and Sol 2001; Simatupang, Wright, and Sridharan 2002; Stephenson 2005). *Operational coordination* focuses on integrating interdependent processes and data flows (den Hengst and Sol 2001; Simatupang, Wright, and Sridharan 2002). Examples include coordinated purchasing and distribution as well as logistics. *Strategic coordination* includes activities that add value through core competencies of involved firms or create a wider collective innovation horizon than that of each individual firm (Dyer and Nobeoka 2000; New 1996). An example of strategic coordination is coordinated new product development.

This paper considers two types of coordination: IT and process improvement. Though IT coordination has been often associated with operational benefits (Prajogo and Olhager 2012), strategic benefits typically result from coordination on process improvement (Dyer and Nobeoka 2000).

Coordination on IT. The effect of adopting IT on companies has been studied in detail, with mixed results. To gain a better understanding

of research to date, we classify benefits by timeframe (long term versus short term) while focusing on SMEs. One position holds that firms obtain little long-term strategic value from IT. According to this position, most companies have adopted IT in the past two decades, and therefore, IT by definition is not a competitive differentiator (Fawcett et al. 2011). IT does provide short-term and operational gains, for example, through transactions-oriented IT (such as electronic data interchange), which is often used as a means to increase efficiency of firms' operations, rather than to coordinate activities within supply networks (Hill and Scudder 2002). Planning systems, which are often driven by downstream actors in the supply network, have also focused on improving operational efficiency of the network (Kumar 2001). However, according to this view, IT systems that provide such operational advantages are increasingly seen as "must-haves" for companies (particularly ones that participate in supply networks) because others have implemented similar technologies (Bhatt and Emdad 2010).

Another understanding of the impact of IT holds that IT does provide both short- and long-term benefits for companies. However, these benefits are not automatic or guaranteed (Nath and Standing 2010). Rather, they follow from the way IT is used (Dibrell, Davis, and Craig 2008; Fawcett et al. 2011). In particular, using IT to interact and coordinate with other companies, particularly in the supply network context, may give rise to hard-to-imitate competitive advantage and thus confer long-term benefits on companies (Adams, Khoja, and Kauffman 2012; Fawcett et al. 2011). Thus, IT typically does not have a direct impact on performance. Rather, this relationship is mediated by other factors such as trust or adoption of other innovations (Dibrell, Davis, and Craig 2008; Gardet and Fraiha 2012), or intermediate payoffs, such as enhanced operational performance, access to new capabilities, or integration with supply network partners (Devaraj, Krajewski, and Wei 2007). Also, the emergence of new collaboration-oriented IT systems may lead to a more long-term impact on the supply network and the benefits derived by individual firms from supply network participation. These collaboration-oriented IT artifacts include wikis, blogs, and other technologies collectively labeled Enterprise 2.0 (McAfee 2009).

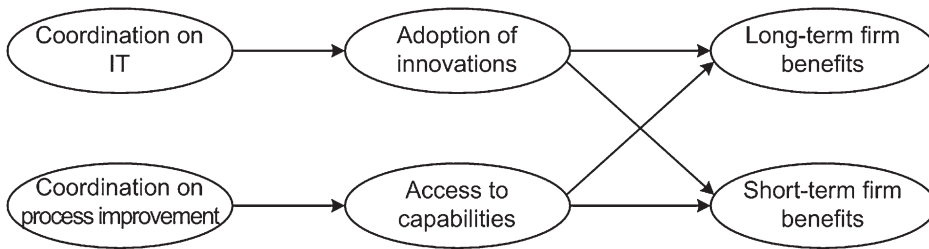
Further, SMEs are less likely to invest in IT than larger companies (Niehm et al. 2010). This is because SMEs lack not only financial resources to invest in IT but also technical expertise that would allow them to keep up with the fast-changing technology landscape (Niehm et al. 2010). This may clearly put them at competitive disadvantage, especially compared to their larger peers. One way to alleviate this disadvantage is for SMEs to participate in supply networks and coordinate with other firms on IT (Erosa-Martín and Arroyo-López 2010; Sherer 2003).

However, the extent to which SMEs engaging in such coordination are likely to reap short-term and long-term benefits, as well as the extent to which this relationship may be mediated by the adoption of other innovations, is not clear from the literature. Therefore, our model includes a relationship between coordination on IT and firm benefits, mediated by adoption of other innovations. We expect to observe a positive relationship between coordination on IT and benefits to the firm in both the short and the long terms. Based on the previous discussion, we expect that coordination on IT does not result in direct benefits but instead is mediated by adoption of other innovations by the firm.

Coordination on Process Improvement.

Supply networks differ in the types of opportunities they offer to their participating companies. Some networks are well known for various initiatives they undertake to improve processes, increase performance, or disseminate knowledge (Corbett, Blackburn, and Van Wassenhove 1999). An increasing number of networks rely on close coordination on processes from the early stages of new product design to ensure successful development, manufacturing, and marketing of the product (Hsu et al. 2009). Process improvements impact quality and cost, attributes that end customers can use to compare product or service offerings. The central role in such initiatives is often played by a handful of organizations or by one focal company in the network (Gardet and Fraiha 2012). A good example of this is the way that Toyota has been able to take these issues and develop both measurable and perceived differences over its rivals GM, Ford, Chrysler, Hyundai, and others (Fane et al. 2003). As Toyota rose to a leader in sales in the auto industry worldwide, its supply network has

Figure 1
Preliminary Research Model



also benefited. From a strategic perspective, an automotive supplier is better positioned as a supplier within the Toyota network compared with the Chrysler network, for example.

Therefore, when an SME enters a supply network, it may, depending on the network, be engaged by other companies in improving its processes. Though such coordinated process improvement may target internal company processes, the benefits may also spread to the rest of the network (Cao and Zhang 2011), which is why focal firms in some networks are investing in such process improvement initiatives.

Coordinating with other supply network firms on process improvement allows the SME to access capabilities and expertise of these firms (Chen, Daugherty, and Landry 2009; Gardet and Fraiha 2012). This is often the underlying mechanism by which improvements in processes occur: The SME obtains access to resources located elsewhere in the network and is able to improve its own processes by integrating these learnings and applying them to other supplier networks in which the firm participates. Improved processes are typically operational improvements that may nonetheless lead to long-term gains for the SME (Chen, Daugherty, and Landry 2009). Developing process improvement capabilities may also ease future coordination efforts (Zacharia, Nix, and Lusch 2011). Therefore, process improvement considerations are of significant importance for SMEs, particularly for those contemplating which supply network to enter (Street and Cameron 2007).

Extant literature, however, does not devote significant attention to mechanisms through

which process improvements may lead to benefits to SMEs. A conceptual article by Chen, Daugherty, and Landry (2009) suggested that process integration may lead to better performance through enhanced capabilities but did not test these propositions. Therefore, our model includes a relationship between coordination on process improvement and firm benefits in both the long and short terms, which is mediated by access to capabilities. We expect to observe a positive relationship between these constructs.

This discussion is summarized in the research model shown in Figure 1.

Methodology

We collected data from manufacturers of plastics products in Pennsylvania. Being a processing industry, plastic manufacturers supply to a variety of other industry sectors and, as the interviews revealed, often characterize themselves based on the industry they supply to rather than belonging to the plastics industry specifically.

A multimethod approach for data collection and analysis was used. Data were collected with surveys and face-to-face interviews and analyzed with structural equation modeling and qualitative analysis methods.

Surveys

The primary goal of the survey instrument was to probe into coordination practices of SMEs, their frequency and outcomes, as well as the outcomes that firms obtain from participating in supply networks as well as from various coordination practices. To that end, the survey instrument included three major sections, in addition to the respondent and firm

demographics¹: details about the firm's dominant supply network (subsequent questions were based on the dominant supply network), outcomes from supply network participation, and details about coordination activities.

A list of potential respondents of 596 manufacturers, 82.3 percent of which are SMEs, was compiled from the Harris Directory and contacts provided by the network of Pennsylvania Industrial Resource Centers. A four-contact approach was used, beginning with a prenotification letter announcing the upcoming survey, a full survey mailed two weeks later, a postcard reminder, and a full survey follow-up mailing to nonrespondents. We also offered potential respondents a web-based option and made approximately 100 telephone calls to encourage nonrespondents to complete the survey.

As a result, 70 usable surveys were received (11.7 percent response rate). This response rate is lower than the average of 14.8 percent previously reported for four-contact approach studies of SMEs (Hartman et al. 2002; Newby, Watson, and Woodliff 2003). To identify any bias resulting from the response rate, a nonrespondent analysis was conducted. Our samples included several demographic variables, such as company age, number of employees, ownership type (public or private), type of location (headquarters or branch), amount of sales, and credit risk score. We performed t-tests to compare respondents and nonrespondents on these variables and found no statistically significant difference between respondents and nonrespondents.

Interviews

The interviews complemented the quantitative survey data with a more detailed description of firm intent and resulting activities, particularly with regard to coordination practices. We conducted onsite interviews with Pennsylvania plastic manufacturers about their coordination and collaboration activities within the plastics supply chain. Informants consisted of presidents, CEOs, and owners, as well as top managers in sales, strategy, marketing, procurement, production, and supply chain management. Interviews lasted between one to one and a half hours. In total, 58 interviews were conducted. Descriptive statistics of all interviewed companies are shown in Figure 2. Of

these, 32 interviews were audio-recorded and later transcribed, coded, and used for systematic analysis.

A semistructured interview protocol was developed to address six major themes: company demographics, relationships with suppliers and customers, the supply network, organizational practices and policies, use of IT, and learning and innovation. Recruitment occurred via phone or email by members of the research team and was based on the same list of 596 Pennsylvania plastics manufacturers that was used for the survey. A standardized script was used during initial contact with potential informants.

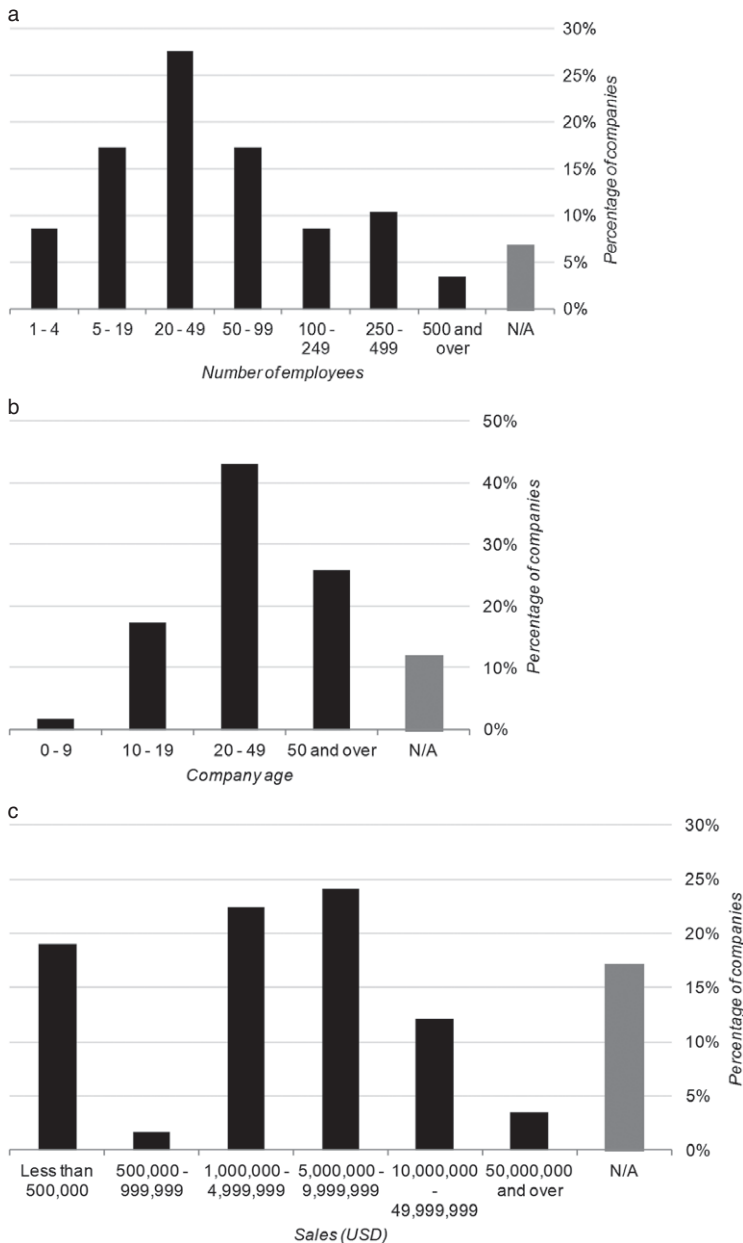
Two criteria for informant selection were used: qualification and geographic location. All informants were asked to qualify themselves as knowledgeable in their company's supply chain activities. If the initial contact did not feel qualified, researchers were often referred to another person within the company. Informants were also recruited based on geographic location in order to gather a sample population representative of the concentration of manufacturers across the state. The state was divided into six major geographic regions with recruitment targeting proportionate distribution of informants from all six regions according to the actual number of manufacturers in that region. Of those contacted, 9.8 percent agreed to be interviewed. Informants were not provided with any form of monetary incentive for participation but were later provided with a copy of the final technical report.

Interviews were conducted on site at an informant's office or work area by a member of the research team. In addition to audio recording (when allowed), notes were also taken throughout the interview process to help capture critical responses and to record aspects of the workplace (informants often articulated a response through the use of artifacts in their workplaces or by touring the researcher around the manufacturing facilities).

Following an iterative two-stage process, interview transcripts were analyzed according to the six major topics. Two sets of codes were developed. First-order data (informant terms) were analyzed through a set of analytic codes according to the sections and questions in the interview guide. Using NVIVO 7.0 software (QSR

¹The survey instrument is available from the authors upon request.

Figure 2
Descriptive Statistics of Interviewed Companies: (a) the Number of Employees, (b) Company Age, and (c) Sales Amounts (USD)



International, Doncaster, Victoria, Australia), first-order data were coded to the appropriate analytic codes. In some cases, first-order data were coded to more than one analytic code due

to the overlap and complexity between questions and responses. Within each analytic code, second-order (researcher terms) concepts were then identified. Researchers then compared

these concepts to those found in the survey to further validate and support survey findings, to resolve discrepancies and conflicts in the survey data, and to identify new findings.

Statistical Analysis

We used AMOS (IBM Corporation, Armonk, NY, USA) to evaluate the statistical model. A two-step approach proposed by Anderson and Gerbing (1988) was followed, which includes a measurement and a structural model. The measurement model is first evaluated and, if necessary, refined using confirmatory factor analysis. The second step is the structural analysis of the model. The advantages of using this approach include the ability to evaluate the goodness of fit of the factor composition and of the model structure separately, which otherwise may influence one another and which may mask a poor fit of one of either the factor composition or the model structure. Furthermore, a two-step approach allows critical evaluation of the trade-off between goodness of fit of the structural model and the degree of causal influence. In other words, although more paths in a model may increase its goodness of fit, they may complicate interpretation of these paths and the concepts they link (Anderson and Gerbing 1988).

Measures of fit were evaluated using several accepted statistics (Bollen 1990; Cordano and Frieze 2000; Seibert, Kraimer, and Liden 2001). The first measure of fit we examined is the chi-squared statistic. A significant chi-squared statistic of either the measurement or the structural model indicates a poor fit. Other measures of fit we report include the comparative fit index (CFI), goodness-of-fit index (GFI), non-normed fit index (NNFI), and root mean square error of approximation (RMSEA). Values of over 0.9 of all these indices except RMSEA indicate acceptable fit, as do RMSEA values below 0.05 (Cordano and Frieze 2000; Hatcher 1994; Hu and Bentler 1995).

Results

The results of our analysis consist of the quantitative (survey) and qualitative (interview) components. Quantitative analysis was only performed on data from the survey (although quantitative data was collected for some model variables during interviews for triangulation purposes). Structural equation modeling (quantitative analysis) explores relationships between the constructs included in our model, and the

qualitative analysis was aimed at gaining more nuanced understanding of the constructs. The interviews also revealed relationships between other characteristics of supply networks.

Structural Equation Modeling

Measurement Model. The measurement model shows a good fit to the data. The chi-squared statistic is not significant ($\chi^2 = 21.75$, $df = 23$, $p < .54$); three fit indices exceed the 0.9 threshold for acceptability (CFI = 1.00; GFI = 0.93; NNFI = 1.04) and RMSEA = 0.00, which is below the 0.05 acceptability threshold. All of these indices demonstrate a good fit between the measurement model and the data.

The four composite constructs of adoption of innovations, access to capabilities, and short-term and long-term benefits were calculated using factor analysis. The underlying items for constructs are based on a series of statements with which the respondents could agree or disagree over a five-item scale. Items included in these factors are shown in Table 1. An example of such statement is "because of participation in this dominant supply network, my company has been able to expand our product sales to new markets." Each of the two coordination variables was based on a dichotomous question regarding the involvement in the coordination practice.

Reliability indices for the four factors are within recommended intervals. Cronbach's α for the adoption of innovations construct is 0.805, for access to capabilities 0.806, for the long-term benefits construct 0.800, and for the short-term benefits 0.627. Thus, all factor loadings are considerably greater than the recommended minimum of 0.4 (Devaraj, Krajewski, and Wei 2007; Gefen, Straub, and Boudreau 2000).

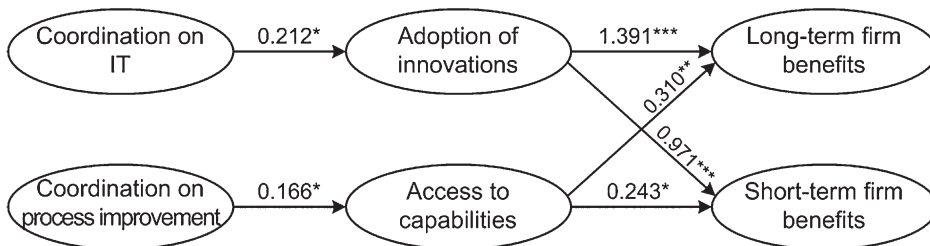
Structural Model. The structural model also exhibits good fit. The chi-squared statistic is not significant ($\chi^2 = 57.03$, $df = 61$, $p < .62$); three fit indices are above the 0.9 threshold (CFI = 1.00; GFI = 0.90; NNFI = 1.02) and RMSEA = 0.00, below the 0.05 acceptability threshold.

Figure 3 graphically shows the relationships between the constructs in the structural model and estimates of the relationships between the constructs. It shows that coordination on IT is associated with greater adoption of innovations. This positive link suggests that companies who participate in shared IT systems are more likely to adopt other innovations that

Table 1
Components of the Four-Factor Constructs: Adoption of Innovations, Access to Capabilities, Long-Term Firm Benefits, and Short-Term Firm Benefits

Adoption of Innovations	Access to Capabilities	Long-Term Firm Benefits	Short-Term Firm Benefits
Because of participation in this dominant supply chain, my company has been able to . . .			
<ul style="list-style-type: none"> • Adopt innovations that benefit my company <i>within</i> this dominant supply chain • Adopt innovations that benefit my company <i>beyond</i> this dominant supply chain 	<ul style="list-style-type: none"> • Gain access to <i>facilities and/or equipment</i> that we do not have • Gain access to <i>expertise</i> that we do not have in our own workforce 	<ul style="list-style-type: none"> • Increase its <i>market share</i> • Expand our product sales to <i>new markets</i> • Reduce the <i>uncertainty</i> in producing this product • Expand our product sales in this dominant supply chain to <i>new geographic locations</i> • Participating in this supply chain has contributed to my company's <i>long-term success</i> 	<ul style="list-style-type: none"> • Increase its <i>profits</i> • Reduce the <i>risk</i> involved in bringing this dominant supply chain product to market • Participating in this supply chain has contributed to my company's <i>short-term success</i>

Figure 3
Relationships between Constructs in the Structural Model



Only significant relationships are shown. * $p < .05$; ** $p < .01$; *** $p < .001$.

benefit them within and outside of their dominant supply chain. Adoption of these innovations, in turn, is associated with benefits in both the short and the long term, as expected.

Figure 3 also shows an association between coordination on process improvement and

greater access to capabilities that the firm does not have in house. Firms that coordinate with others on improving processes are more likely to have increased access to facilities and expertise they do not possess themselves. As expected, such access is also linked to long-

term benefits. Additionally, the results suggest that greater access to capabilities is beneficial in the short term.

It is interesting to note that coordination at both strategic and operational levels is linked to short-term and long-term benefits. At the same time, the two types of coordination included in the model were selected because they are examples of coordination at the operational (IT) and strategic (process improvement) levels.

Interviews

The goal of the interviews and the qualitative analysis was to complement structural equation modeling of the relationship between coordination and firm benefits and gain further understanding of these concepts and relationships.

With regard to coordination on IT, most information systems used by the respondents are aimed at improving efficiency and speed of operations. This includes ordering, online payments, inventory tracking, and logistics. One company did not even have any IT systems that were not connected to other companies' systems:

Interviewer: *Do you have many stand-alone systems or coordinated systems with other companies?*

Respondent: *I'm not aware of any stand-alone.*

In our interviews, coordination on IT appears to be a customer pull phenomenon. In most cases of collaboration on IT, the firms were required by their customers to use their information systems and sometimes even pay a monthly fee for accessing a system and providing information to the customer. A respondent observed:

We had to buy software, which came from [our customer] actually; they required it. We buy it [from] them.

A number of respondents indicated that they coordinated activities specifically in the area of process improvement. Coordination on process improvement is often seen not only as an opportunity for building or enhancing customer relations but also as beneficial for the firm. One respondent noted the mutual benefits of such coordination:

We are going next month to do a value stream mapping of [a product] to try to take some of the waste out of [our supplier's] system. It does two things: it's a benefit on our end because we will ultimately see a cost savings out of it, [and] it's a benefit [to our supplier] because they can utilize what we teach them for our particular product.

Our interviews suggest that initiation of coordination is frequently pursued by larger and more powerful firms in the supply network. Firms may be expected to participate in a coordination activity initiated by another firm (typically a more powerful one) as a condition of participating in the supply chain itself. One of the interviewees indicated that he was forced by a major customer to use an information system that was incompatible with his company's internal systems and to pay a monthly fee for accessing this system. Though the payment condition was not typical across interviews, initiation of coordination by a major supplier or customer, particularly by leading firms in their industries, was indicated several times.

Customers that initiate coordination often seek to remain competitive in the market or expand their market. Suppliers, on the other hand, may initiate coordination when they design new products and proactively share them among firms. The firms may require modifications to the product, which may lead to coordinated effort on design and production.

Furthermore, in many cases, respondents indicated that their firms initiated a coordination practice themselves. Though initiation of coordination in different areas was driven by different motivations, efficiency and cost savings were often reported as two major motives.

Discussion

The results suggest that coordination on both IT and process improvement influences firm benefits in the short and long term. This relationship is mediated by two other variables: adoption of innovations and access to capabilities. This section discusses these findings based on quantitative and qualitative analysis.

Firm Benefits from Supply Network Participation

Although extant research on firm benefits recognizes the multidimensional nature of this construct (Venkatraman and Ramanujam 1986),

to date, only limited empirical evidence exists to demonstrate the source of the benefits of network participation for individual firms (Gronum, Verreyne, and Kastle 2012). On the other hand, traditional views of firm performance have yet to empirically account for the components of performance that can be attributed to a firm's network relationships. Our statistical model, which exhibits good fit to the data ($\chi^2 = 57.03$, $df = 61$, $p < .62$; CFI = 1.00, GFI = 0.90, NNFI = 1.02, RMSEA = 0.00), as well as interview data, suggests a positive relationship between supply network participation and firm benefits, operationalized as a multidimensional construct.

We conceptualize the components of firm performance that can be attributed to interaction with supply network partners. The supply network was viewed as the totality of supplier relations, which contain vertical as well as horizontal relations in multiple and sometimes overlapping supply chains. This conceptualization provides the basis for operationalizing firm benefits not only as traditional performance-based outcomes, such as expansion of product sales, but also as innovations or improvements that are generated in one supply chain that can be used across a firm's multiple supply chains, thereby capturing the benefits attributable to network participation. This empirically supports conjecture on the impact of process improvement coordination on firm benefits, mediated by enhanced access to capabilities throughout the supply network (Chen, Daugherty, and Landry 2009).

Our measures of firm benefits have two additional important features. First, they include both the short-term (e.g., expansion of sales) and long-term (e.g., improvement of practices and adoption of innovations) components (Human and Provan 1997). Second, they consider firm performance as indirectly related to firm participation in a supply network. The interdependencies of firm performance were further supported by interviews in which managers discussed their efforts to improve the performance of their suppliers and, even in some cases, their customers. By considering two coordination practices simultaneously, and grouping benefits into the two time horizons, the results extend previous recent studies demonstrating the mediated effect of network participation on firm performance (Gronum, Verreyne, and Kastle 2012).

Results of structural equation modeling indicate that our measures of firm benefits are valid. These measures have high Cronbach's α values (0.627 for short-term and 0.800 for long-term benefits), suggesting that short-term and long-term benefits are indeed distinct. This has theoretical implications for supply networks scholars and calls attention to firm benefits that stem from interactions with firm's network partners. This influence of the network on benefits for individual firms may (and should) be an important determinant of the firm's decision to enter a particular supply network.

Furthermore, this study provides greater nuance to findings of extant research by exploring the link between specific coordination activities and particular benefits to an individual firm (Becker and Murphy 1992). Coordination on process improvement affects learning as well, which is an important component of firm performance. Thus, coordination affects particular benefits that are associated with learning, namely access to new capabilities.

Our findings lend themselves to further research on the impact of coordination on other well-known antecedents of firm benefits, such as goal alignment and trust. We found that coordination appears to play an intermediary role between these antecedents and benefits. We apply this logic to the firm level as well; however, the specifics of the relationship between coordination and trust are an area of potential future research.

Coordination

Past research has emphasized the importance of choosing the appropriate network for the firm since the network is likely to influence the firm in ways particular to that network (Gulati, Nohria, and Zaheer 2000). Although that consideration is beyond doubt important, our results bring attention to the opposite dynamics: the deliberate, strategic construction and use of network relationships by the firm. Our results also suggest that the firm's benefits are expanded when these successful practices are applied to other networks in which the firm participates.

Such agency on the part of the firm may be a competitive differentiator for firms with similar competencies, similar market positions, and similar positions within the supply network. Interviewed firms commented on the initiation of coordination around order processing, inventory control, and material standardization,

noting that the practices added great benefit to their company. They also noted that such coordination also added value to other companies in the supply network. Further, when we compared the top 20 percent of interviewed firms in terms of three-year average revenue growth with the bottom 20 percent, the top performers were initiating coordination much more frequently.

Coordination is premised on the understanding that coordination activities will vary not only on fundamental characteristics, such as frequency or the number of partners involved, but also and perhaps more importantly in their implications for participating firms and for the supply network. Not surprisingly, our analysis indicates that the frequency of participation in individual coordination activities varies. On average, however, coordination on both IT and process improvement has moderate levels of participation.

These findings indicate that coordination activities, which are undertaken with only moderate frequency, present a strong and statistically significant positive, albeit indirect, relationship with firm benefits. This finding, in addition to providing empirical evidence of the benefits of particular types of coordination, also provides greater nuance.

As for specific coordination practices, we found that coordination on IT is associated with both long-term and short-term benefits for firms, and this relationship was mediated by the adoption of other innovations: the relationship between coordination on IT and adoption on innovations was statistically significant at 0.05 level, and between adoption of innovations and both long-term and short-term benefits at 0.001 level. This suggests that supply networks are good vehicles for adoption of IT and other innovations for SMEs. SMEs realize benefits from them at least in part through coordination with other companies. This may help SMEs alleviate their relative technological disadvantage compared with larger companies (Sherer 2003).

Coordination on process improvement is also associated with both long-term and short-term benefits, mediated by access to capabilities. Relationships between coordination on process improvement and access to capabilities, as well as between access to capabilities, were statistically significant at 0.05 level; the relationship between access to capabilities and long-term benefits was significant at 0.01 level.

This lends empirical support to past work that suggested such link (Chen, Daugherty, and Landry 2009). These results also indicate how SMEs can benefit from coordinating on process improvement in the supply network context. Such coordination may be associated with tapping into expertise and capabilities of other firms, which in turn is likely to be beneficial for the SME (Gardet and Fraiha 2012).

The results have managerial implications. They suggest action paths for managers of firms that are embedded in supply networks, and areas in which firms should pursue coordination with others to achieve short-term and long-term benefits. Managers may pursue concrete coordination efforts in relationships with their customers and suppliers, knowing that these activities are likely to result in benefits both in the short and the long term. At the same time, coordination with other firms, especially one which may continue for a long period of time, requires careful ongoing management. Such management may, depending on the specific coordination practice, be periodic (e.g., quarterly process improvement sessions) or on the needs basis (e.g., new product design occurs only at specific times of the production cycle). Benefits from coordination arise from better planning and investment in it on the part of the firm. For example, knowing that the development of a new product will take place in prolonged coordination with others, the firm may be more likely to optimize its internal practices and work with the coordination partner to optimize practices on which the two firms interface.

Coordination also requires going beyond the "cost first" logic, which usually results in quick changes of coordination partners. It is unlikely, for example, that the OEM would invest efforts into jointly developing a component with a tier 1 firm, only to abandon it before production starts (assuming no objective reasons, such as unsatisfactory performance of one party). Although cost benefits from coordination may not be immediately apparent, they are likely to materialize eventually, for example, through jointly developed innovations or in the form of savings from the absence of supplier switching.

Thus, participation in supply networks offers additional opportunities for enhancing firm benefits through coordination. These opportunities are in addition to internal activity and characteristics of the firm (e.g., product offer strategy or management quality), which are by all means important.

Conclusions

This paper explored the link between coordination among firms and firm benefits in the context of supply networks. It did so through a combination of quantitative and qualitative analysis. The results suggest that benefits from supply chain participation can be disaggregated into long-term (e.g., gaining access to new markets) and short-term ones (e.g., increase in profits). The relationship between coordination and these benefits is significant and is mediated by other variables, namely the adoption of innovations and access to new capabilities. This research thus extends the literature on benefits of network participation to individual firms (Chen, Daugherty, and Landry 2009; Gronum, Verreyne, and Kastle 2012) by providing empirical support to this relationship. It also elucidates the mechanism through which SMEs can obtain these benefits, specifically through utilizing capabilities and expertise of other network firms (Gardet and Fraiha 2012). Further, this research examines the details of both coordination and benefits constructs, by considering particular coordination activities (IT and process improvement) and specific benefits to the firm, in both the long and the short terms. In sum, these results shed light on an underexplored area of firm benefits that stem from firm's participation and coordination in the network.

The analysis can be extended in several ways. A more practice-oriented avenue of research may be pursued, and the constructs of coordination may be expanded to include other coordination practices. Furthermore, the model constructed in this paper can be extended to determine whether it can provide insights on relationships between higher-level constructs, such as trust and learning, with coordination and firm benefits.

References

- Adams, J. H., F. M. Khoja, and R. Kauffman (2012). "An Empirical Study of Buyer-Supplier Relationships within Small Business Organizations," *Journal of Small Business Management* 50(1), 20-40.
- Alexander, E. R. (1995). *How Organizations Act Together: Interorganizational Coordination in Theory and Practice*. Luxembourg: Gordon and Breach Publishers.
- Anderson, J. C., and D. W. Gerbing (1988). "Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach," *Psychological Bulletin* 103(3), 411-423.
- Barringer, B. R., and J. S. Harrison (2000). "Walking a Tightrope: Creating Value Through Interorganizational Relationships," *Journal of Management* 26(3), 367-403.
- Beamon, B. M. (1999). "Measuring Supply Chain Performance," *International Journal of Operations and Production Management* 19(3), 275-292.
- Becker, G. S., and K. M. Murphy (1992). "The Division of Labor, Coordination Costs, and Knowledge," *The Quarterly Journal of Economics* 107(4), 1137-1160.
- Bhatt, G. D., and A. F. Emdad (2010). "An Empirical Examination of the Relationship between Information Technology (IT) Infrastructure, Customer Focus, and Business Advantages," *Journal of Systems and Information Technology* 12(1), 4-16.
- Bollen, K. A. (1990). "Overall Fit in Covariance Structure Models: Two Types of Sample Size Effects," *Psychological Bulletin* 107(2), 256-259.
- Borgatti, S. P., and P. C. Foster (2003). "The Network Paradigm in Organizational Research: A Review and Typology," *Journal of Management* 29(6), 991-1013.
- Cao, M., and Q. Zhang (2011). "Supply Chain Collaboration: Impact on Collaborative Advantage and Firm Performance," *Journal of Operations Management* 29(3), 163-180.
- Chan, H. K., and F. T. S. Chan (2010). "A Review of Coordination Studies in the Context of Supply Chain Dynamics," *International Journal of Production Research* 48(10), 2793-2819.
- Chen, H., P. J. Daugherty, and T. D. Landry (2009). "Supply Chain Process Integration: A Theoretical Framework," *Journal of Business Logistics* 30(2), 27-46.
- Chen, J. (1997). "Achieving Maximum Supply Chain Efficiency," *IEEE Solutions* 29(6), 30-35.
- Corbett, C. J., J. D. Blackburn, and L. N. Van Wassenhove (1999). "Partnerships to Improve Supply Chains," *MIT Sloan Management Review* 40(4), 71-82.
- Cordano, M., and I. H. Frieze (2000). "Pollution Reduction Preferences of US Environmental Managers: Applying Ajzen's Theory of Planned Behavior," *Academy of Management Journal* 43(4), 627-641.
- den Hengst, M., and H. G. Sol (2001). "The Impact of Information and Communication

- Technology on Interorganizational Coordination,” paper presented at Proceedings of the 34th Annual Hawaii International Conference on System Sciences, Maui, Hawaii.
- De Souza, R., S. Zice, and L. Chaoyang (2000). “Supply Chain Dynamics and Optimization,” *Integrated Manufacturing Systems* 11(5), 348–364.
- Devaraj, S., L. Krajewski, and J. C. Wei (2007). “Impact of eBusiness Technologies on Operational Performance: The Role of Production Information Integration in the Supply Chain,” *Journal of Operations Management* 25(6), 1199–1216.
- Dibrell, C., P. S. Davis, and J. Craig (2008). “Fueling Innovation through Information Technology in SMEs,” *Journal of Small Business Management* 46(2), 203–218.
- Dyer, J. H., and K. Nobeoka (2000). “Creating and Managing a High-Performance Knowledge-Sharing Network: The Toyota Case,” *Strategic Management Journal* 21(3), 345–367.
- Erosa-Martín, V. E., and P. E. Arroyo-López (2010). “Segmentation of Small Firms Based on Information Technology Usage and Absorptive Capabilities,” paper presented at Technology Management for Global Economic Growth (PICMET), Phuket, Thailand.
- Fane, G. R., M. R. Vaghefi, C. Van Deusen, and L. A. Woods (2003). “Competitive Advantage the Toyota Way,” *Business Strategy Review* 14(4), 51–60.
- Fawcett, S. E., C. Wallin, C. Allred, A. M. Fawcett, and G. M. Magnan (2011). “Information Technology as an Enabler of Supply Chain Collaboration: A Dynamic-Capabilities Perspective,” *Journal of Supply Chain Management* 47(1), 38–59.
- Gardet, E., and S. Fraiha (2012). “Coordination Modes Established by the Hub Firm of an Innovation Network: The Case of an SME Bearer,” *Journal of Small Business Management* 50(2), 216–238.
- Gefen, D., D. W. Straub, and M.-C. Boudreau (2000). “Structural Equation Modeling and Regression: Guidelines for Research Practice,” *Communications of the Association for Information Systems* 4, 1–76.
- Gronum, S., M.-L. Verreyne, and T. Kastle (2012). “The Role of Networks in Small and Medium-Sized Enterprise Innovation and Firm Performance,” *Journal of Small Business Management* 50(2), 257–282.
- Gulati, R., N. Nohria, and A. Zaheer (2000). “Strategic Networks,” *Strategic Management Journal* 21(3), 203–215.
- Hartman, J. M., J. W. Forsen, M. S. Wallace, and J. G. Neely (2002). “Tutorials in Clinical Research: Part IV: Recognizing and Controlling Bias,” *The Laryngoscope* 112(1), 23–31.
- Hatcher, L. (1994). *A Step-by-Step Approach to Using the SAS System for Factor Analysis and Structural Equation Modeling*. Cary, NC: SAS Publishing.
- Havnes, P.-A., and K. Senneseth (2001). “A Panel Study of Firm Growth among SMEs in Networks,” *Small Business Economics* 16(4), 293–302.
- Hill, C. A., and G. D. Scudder (2002). “The Use of Electronic Data Interchange for Supply Chain Coordination in the Food Industry,” *Journal of Operations Management* 20(4), 375–387.
- Hsu, C. C., K. C. Tan, V. R. Kannan, and G. Keong Leong (2009). “Supply Chain Management Practices as a Mediator of the Relationship between Operations Capability and Firm Performance,” *International Journal of Production Research* 47(3), 835–855.
- Hu, L.-T., and P. M. Bentler (1995). “Evaluating Model Fit,” in *Structural Equation Modeling: Concepts, Issues and Applications*. Ed. R. H. Hoyle. Thousand Oaks, CA: Sage Books, 76–99.
- Human, S. E., and K. G. Provan (1997). “An Emergent Theory of Structure and Outcomes in Small-Firm Strategic Manufacturing Networks,” *Academy of Management Journal* 40(2), 368–403.
- Isik, F. (2011). “Complexity in Supply Chains: A New Approach to Quantitative Measurement of the Supply Chain Complexity,” in *Supply Chain Management*. Ed. P. Li. Rijeka, Croatia: InTech, 417–432.
- Kaufman, A., C. H. Wood, and G. Theyel (2000). “Collaboration and Technology Linkages: A Strategic Supplier Typology,” *Strategic Management Journal* 21(6), 649.
- Kraul, R., and L. Streeter (1995). “Coordination in Software Development,” *Communication of ACM* 38(3), 69–81.
- Kumar, K. (2001). “Technology for Supporting Supply Chain Management: Introduction,” *Communications of the ACM* 44(6), 58–61.
- Lee, C., K. Lee, and J. M. Pennings (2001). “Internal Capabilities, External Networks and Performance: A Study on Technology-

- Based Ventures," *Strategic Management Journal* 22(6-7), 615-640.
- McAfee, A. (2009). *Enterprise 2.0: New Collaborative Tools for Your Organization's Toughest Challenges*. Boston, MA: Harvard Business School Press.
- Malone, T. W., and K. Crowston (1994). "The Interdisciplinary Study of Coordination," *ACM Computing Surveys* 26(1), 87.
- Maloni, M. J., and W. C. Benton (1997). "Supply Chain Partnerships: Opportunities for Operations Research," *European Journal of Operational Research* 101(3), 419-429.
- Mowery, D. C., J. E. Oxley, and B. S. Silverman (1996). "Strategic Alliances and Interfirm Knowledge Transfer," *Strategic Management Journal* 17(Special Issue: Knowledge and the Firm), 77-91.
- Narula, R. (2004). "R&D Collaboration by SMEs: New Opportunities and Limitations in the Face of Globalisation," *Technovation* 24(2), 153-161.
- Nath, T., and C. Standing (2010). "Drivers of Information Technology Use in the Supply Chain," *Journal of Systems and Information Technology* 12(1), 70-84.
- New, S. J. (1996). "A Framework for Analysing Supply Chain Improvement," *International Journal of Operations and Production Management* 16(4), 19-34.
- Newby, R., J. Watson, and D. Woodliff (2003). "SME Survey Methodology: Response Rates, Data Quality, and Cost Effectiveness," *Entrepreneurship Theory and Practice* 28(2), 163-172.
- Niehm, L. S., K. Tyner, M. C. Shelley, and M. A. Fitzgerald (2010). "Technology Adoption in Small Family-Owned Businesses: Accessibility, Perceived Advantage, and Information Technology Literacy," *Journal of Family and Economic Issues* 31(4), 498-515.
- Nooteboom, B. (1999). "Innovation and Inter-Firm Linkages: New Implications for Policy," *Research Policy* 28, 793-805.
- Petrick, I., and N. Pogrebnnyakov (2008). "Innovation in distributed networks and supporting knowledge flows," in *Supply Chain Management and Knowledge Management: Integrating Critical Perspectives in Theory and Practice*. Eds. A. Dwivedi and T. Butcher. Basingstoke, UK: Palgrave Macmillan, 3-18.
- Pogrebnnyakov, N., and J. D. Kristensen (2011). "Building Innovation Subsidiaries in Emerging Markets: The Experience of Novo Nordisk," *Research-Technology Management* 54(4), 30-37.
- Powell, W. W., K. W. Koput, and L. Smith-Doerr (1996). "Interorganizational Collaboration and the Locus of Innovation: Networks of Learning in Biotechnology," *Administrative Science Quarterly* 41(1), 116-145.
- Prajogo, D., and J. Olhager (2012). "Supply Chain Integration and Performance: The Effects of Long-Term Relationships, Information Technology and Sharing, and Logistics Integration," *International Journal of Production Economics* 135(1), 514-522.
- Provan, K. G., and H. B. Milward (2001). "Do Networks Really Work? A Framework for Evaluating Public-Sector Organizational Networks," *Public Administration Review* 61(4), 414-423.
- Raposo, A. B., and H. Fuks (2002). "Defining Task Interdependencies and Coordination Mechanisms for Collaborative Systems," in *Cooperative Systems Design: A Challenge of the Mobility Age*. Eds. M. Blay-Fornarino, A. M. Pinna-Dery, K. Schmidt, and P. Zaraté. Amsterdam: IOS Press, 88-103.
- Seibert, S. E., M. L. Kraimer, and R. C. Liden (2001). "A Social Capital Theory of Career Success," *Academy of Management Journal* 44(2), 219-237.
- Sherer, S. A. (2003). "Critical Success Factors for Manufacturing Networks as Perceived by Network Coordinators," *Journal of Small Business Management* 41(4), 325-345.
- Simatupang, T. M., A. C. Wright, and R. Sridharan (2002). "The Knowledge of Coordination for Supply Chain Integration," *Business Process Management Journal* 8(3), 289-308.
- Souza, R. D., S. Zice, and L. Chaoyang (2000). "Supply Chain Dynamics and Optimization," *Integrated Manufacturing Systems* 11(5), 348-364.
- Stephenson, M. (2005). "Making Humanitarian Relief Networks More Effective: Operational Coordination, Trust and Sense Making," *Disasters* 29(4), 337-350.
- Street, C. T., and A.-F. Cameron (2007). "External Relationships and the Small Business: A Review of Small Business Alliance and Network Research," *Journal of Small Business Management* 45(2), 239-266.
- Subramani, M. (2004). "How do Suppliers Benefit from Information Technology use in Supply Chain Relationships?," *MIS Quarterly* 28(1), 45-73.

- Thompson, J. D. (1967). *Organizations in Action: Social Science Bases of Administrative Theory*. New York, NY: McGraw-Hill.
- Uzzi, B. (1996). "The Sources and Consequences of Embeddedness for the Economic Performance of Organizations: The Network Effect," *American Sociological Review* 61(4), 674–698.
- Venkatraman, N., and V. Ramanujam (1986). "Measurement of Business Performance in Strategy Research: A Comparison of Approaches," *The Academy of Management Review* 11(4), 801–814.
- Wolff, J. A., and T. L. Pett (2006). "Small-Firm Performance: Modeling the Role of Product and Process Improvements," *Journal of Small Business Management* 44(2), 268–284.
- Yu, Z., H. Yan, and T. C. E. Cheng (2001). "Benefits of Information Sharing with Supply Chain Partnerships," *Industrial Management and Data Systems* 101(3), 114–119.
- Zacharia, Z. G., N. W. Nix, and R. F. Lusch (2011). "Capabilities that Enhance Outcomes of an Episodic Supply Chain Collaboration," *Journal of Operations Management* 29(6), 591–603.

Family Control, International Accounting Standards, and Access to Foreign Banks: Evidence from International Entrepreneurial Firms*

by Qiu Chen, Shujun Ding, Zhenyu Wu, and Fan Yang

This article aims to understand if a change in accounting standards offers new avenues for helping entrepreneurial firms, especially those family-controlled ones, to obtain debt financing from foreign banks. We find that amid the global wave of adopting International Accounting Standards (IAS), family-controlled firms tend not to voluntarily switch from local generally accepted accounting principles to IAS. After self-selection issues are taken into account, furthermore, entrepreneurial firms adopting IAS experience less difficulty accessing loans from international banks. However, IAS adoption differentially influences private firms, family owned versus nonfamily controlled, in terms of their access to debt capital.

It is widely accepted that debt financing is crucial for entrepreneurial firms' survival and growth (Carsrud and Brnnback 2010; Chua et al. 2011; Petersen and Rajan 1994, 1995). Debt financing is important for privately held firms for several reasons. First, firms in the private sector do not have access to public equity markets, and most of them rely on bank lending as their main source of capital (Pacter 2009). Second, borrowing from banks and other financial institutions allows private firm owners to maintain control, which is especially important for privately held family business owners (Chua et al. 2011; Gómez-Mejia et al. 2011). Third, borrowers can deduct interest from taxable

income; therefore, interest expenses serve as a tax shield (Chen, Ding, and Wu 2014). Finally, debt financing sends out a strong signal to potential equity investors by demonstrating the owners' confidence in success (Chen, Ding, and Wu 2014). In this study, we follow prior literature and define entrepreneurial firms as relatively young, small, and growing firms that exploit opportunities and create future goods and services (Markman and Baron 2002; Shane 2000; Venkataraman 1997). Researchers, practitioners, and policymakers have documented a variety of means to deal with this critical issue (Berger and Udell 1995, 1998, 2002). We aim to understand if a change in accounting standards

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offers new avenues for helping entrepreneurial firms to obtain debt financing. Many proponents claim that the worldwide adoption and implementation of International Accounting Standards (IAS) and International Financial Reporting Standards (IFRS) are among the most significant economic events in recent decades (Daske et al. 2008); more than 100 countries have converged to IAS/IFRS, including many developed countries such as the European Union (EU) members and developing countries such as China. IAS were issued by the International Accounting Standards Committee, whereas IFRS were issued by the International Accounting Standards Board (Barth, Landsman, and Lang 2008); the latter succeeded the former in 2001 to assume the standard-setting responsibilities. The objectives of adopting a common set of accounting standards are to boost comparability of accounting information across jurisdictions and to improve accounting information quality. Researchers have extensively examined the economic implications of adopting and implanting IAS/IFRS and found that, among others, the adoption of IAS does help achieve such objectives (Barth, Landsman, and Lang 2008). The harmonization of accounting standards under the umbrella of IAS increases cross-border investments in both stock and debt markets.

Extensive research notwithstanding, a key area is understudied amid the global wave of adopting IAS: the economic implications of IAS adoption in the private sector.¹ When a country decides to adopt IAS/IFRS, the mandatory requirement only applies to publicly listed companies. As a result, privately held firms can choose between the local generally accepted accounting principles (GAAPs) and IAS (Francis et al. 2008). In other words, privately held firms are not mandatorily required to report under IAS but may voluntarily adopt it if they wish. Our study is intended to help fill in the gap by examining the IAS application in the private sector.

The voluntary nature of IAS adoption determines that private firms will have to consider both costs and benefits of adopting this universal set of standards. The cost is obvious, as

switching from the local GAAP to IAS is resource consuming. However, the benefit may arise from increased comparability and quality of accounting information prepared under IAS. For instance, the survey conducted by Financial Executives International and KPMG showed that executives of private firms particularly hoped that their adoption of IAS would enhance their access to debt capital, and were concerned that they could be disadvantaged if they continue to use local GAAP. To help private firms decide between the local GAAP and IAS, the PricewaterhouseCoopers (PwC) (2009) suggests that a firm should adopt IAS if it intends to access debt capital from international banks and other international financial institutions; this suggestion seems plausible, as increased comparability and quality of accounting information arising from IAS reporting are expected to help international banks make their loan decisions in the global market. Therefore, it is widely perceived that IAS adoption will help privately held firms, especially entrepreneurial ones, tackle one of the most challenging issues facing them: debt financing. In the literature on entrepreneurial firms' debt financing, however, no empirical evidence is available to support such claim, and the lack of evidence in this important field motivates us to examine in this study the IAS adoption decision among entrepreneurial firms. Meanwhile, family involvement is commonly seen in the private sector (Chrisman, Sharma, and Taggar 2007; Chua, Chrisman, and Sharma 1999; Chua et al. 2011; Cucculelli 2010) and represents a unique organizational form. Family-controlled businesses constitute an important economic force in the United States and around the world (La Porta, Lopez-de-Silanes, and Shleifer, 1999). However, whether family firms are more likely to adopt IAS is not examined by prior studies, either. We therefore answer the first research question: Are family-controlled firms more likely to voluntarily adopt IAS?

We then explore if entrepreneurial firms' voluntary adoption of IAS leads to enhanced access to international lenders. Access to capital provided by international banks is increasingly important and common, as the

¹Prior studies (McMahon 2001; Moores and Mula 1993) in the literature address the relationship between financial reporting practices and small and medium-sized enterprises' growth and performance. However, no research sheds light on adoption of IAS or the relationship between financial reporting practices and entrepreneurial firms' debt financing.

globalization of capital markets makes cross-border investment/lending easier and firms interested in entering foreign markets could be disadvantaged without such access. The PwC (2009) report further indicates that firms with an internationalization strategy should exploit the opportunity to access foreign capital. We examine this issue in our second research question: Does IAS adoption by entrepreneurial firms improve their access to foreign banks?

Furthermore, we examine if IAS adoption has a differential effect on entrepreneurial firms with family involvement versus those without. Prior studies document that accounting information disclosed by family firms tends to be of higher quality (Ali, Chen, and Radhakrishnan 2007; Chen, Chen, and Cheng 2008; Wang 2006). As a result, we posit that a switching from a local GAAP to IAS may cause family firms to experience accounting information quality improvement to a lesser extent. Nonfamily firms, on the other hand, may experience a greater improvement of their information quality, given their low-quality information before the IAS adoption. We therefore explore if IAS adoption interacts with family ownership to influence their access to international debt providers by answering the third research question: Does IAS adoption have the same effect on entrepreneurial firms' international debt financing, both family controlled and nonfamily controlled?

Our data are extracted from the World Business Environment Survey (WBES) in 2000²; this data set provides valuable information on family control and voluntary IAS adoption by entrepreneurial firms in 80 countries and one territory in the globe. After controlling for the self-selection issue of IAS adoption with respect to family involvement, we find that family-controlled firms tend not to voluntarily switch from local GAAPs to IAS but that entrepreneurial firms adopting IAS experience less difficulty accessing loans from international banks. A significantly negative interaction between family ownership and IAS adoption is shown as well, suggesting that IAS adoption differentially

influences private firms, family owned versus nonfamily controlled, in terms of their access to debt capital.

We expect these findings to contribute to the literature on entrepreneurship in general and entrepreneurial firms' debt financing in particular. Little has been done to shed light on the implications of IAS adoption among privately held companies, especially entrepreneurial firms and those with family involvement. Our study helps fill in this gap, and by addressing the advantages of public policies and institutional changes in financial reporting practices on financing family-controlled entrepreneurial firms' growth, our findings add to the family firm management literature. Our study also provides insights to standard setters. The IAS/IFRS for Private Enterprises were established in 2009, but little empirical evidence is available to understand its impact on privately held firms. Our study, employing IAS adoption provided by the WBES, contributes to further IFRS refinement.

The remainder of this paper proceeds as follows. The next section develops hypotheses and discusses their relation to the previous literature, followed by a section which describes data and methodology. The last two sections report the empirical results and conclude the paper, respectively.

Hypotheses Development and Literature Review

Family Involvement and Voluntary IAS Adoption

It is important to examine the factors that affect IAS adoption in the private sector (Bassemir 2012; Francis et al. 2008). In the relevant literature, however, prior studies offer no insight on this important issue, and no research has been found to address the effect of family involvement in entrepreneurial firms on their voluntary IAS adoption. On the one hand, family firms may be more likely to switch from local GAAPs to IAS for two reasons. First, convergence to IAS is resource consuming, especially

²A more recent survey, that is, the World Bank Enterprise Survey (2011), has been conducted, but the data set drawn from this survey cannot be used for this study mainly for two reasons. First, our focal point is to examine debt access to foreign banks by family-controlled firms. This key variable of family control is not available on WBES 2011. Second, possibly more important, the WBES 2011 no longer provides information on whether a private firm has voluntarily adopted the IAS or IFRS. Our examination of family firms' access to foreign capital is in the context of accounting standards adoption; without this key variable, the WBES 2011 data are not adopted by our study.

for small, privately held firms constrained by resources. However, firms with long-term orientation, such as family-controlled ones (Chua, Chrisman, and Sharma 1999; Le Breton-Miller and Miller 2006), may be willing to invest in this opportunity, as the long-term benefits may outweigh the cost of switching. Furthermore, family firms accentuate long-term growth and succession (Chrisman, Chua, and Sharma 2005; Chua et al. 2011; Cucculelli 2010; Sharma, Chrisman, and Chua 1997); a well-established accounting system, with an international reputation, is likely to be the legacy that the family wants to pass on to its next generation. The notion that family firms give priority to long-term growth and intergeneration succession is also consistent with family firm's goals in preserving socio-emotional wealth (SEW) rooted in better reputation, the key feature that differentiates family firms from their nonfamily counterpart (Gómez-Mejía et al. 2007; Kotlar and De Massis 2012; Zellweger and Astrachan 2008; Zellweger et al. 2012). Second, family firms are well known for their higher quality accounting information compared with their nonfamily counterparts (Ali, Chen, and Radhakrishnan 2007; Chen, Chen, and Cheng 2008; Wang 2006). As discussed in the following subsection in further detail, IAS is found to increase accounting information quality (Barth, Landsman, and Lang 2008). As a result, family firms may prefer IAS to local GAAP as a means to further improve its accounting information quality and to signal its strength.

On the other hand, however, family firms could be reluctant to adopt IAS voluntarily. Different from local (non-U.S.) GAAPs, IAS requires firms to more extensively disclose their information (Bassemir 2012; Francis et al. 2008). Such extensive disclosure could be risky, as firms may incur proprietary cost, such as the leakage of key information sought by competitors (Verrecchia 1983). Furthermore, an extensive disclosure, as required by IAS, may also compromise a family's preservation of SEW. In addition, though both family firms and nonfamily firms may demand access to bank loans, the former may use their own, or borrow, social capital to help get access to debt (Chua et al. 2011; Pearson, Carr, and Shaw 2008). As a result, family firms do not have to rely on IAS adoption to help secure debt access.

In sum, whether family control encourages entrepreneurial firms to adopt IAS voluntarily is

an empirical issue. Our first hypothesis, developed in two alternate forms, is as follows:

H1a: Family-controlled entrepreneurial firms are more likely to adopt IAS than do nonfamily-controlled ones.

H1b: Family-controlled entrepreneurial firms are less likely to adopt IAS than do nonfamily-controlled ones.

Family Control and Access to Foreign Banks

The globalization of equity and debt markets expands banks' business across borders. Family firms may be preferred by foreign banks for several reasons. First, as noted earlier, family firms are more likely to provide higher quality information, which helps ameliorate issues arising from information asymmetry between lenders and borrowers (Chua et al. 2011; Smith and Warner 1979; Wu and Chua 2012). Second, family firms are characterized by less severe agency conflicts between owners and management, as the former usually assumes management positions in the firm (Chua et al. 2011; Ding and Wu 2012; Wu, Hedges, and Zhang 2007). This is especially the case in privately held family businesses. Banks, including foreign ones, may believe that such firms have a lower risk of default because of the minimized owner–manager agency conflict (Jensen and Meckling 1976; Shleifer and Vishny 1997). Third, family firms generally focus on long-term growth (Kotlar and De Massis 2012); such a focus may motivate them to develop a long-term relationship with banks.

On the other hand, however, family firms may experience more difficulties in accessing bank loans than nonfamily ones do. First, the possible owners/management overlapping may well lead to a lower level of information disclosure, as the owners could be well aware of the operation of the firm due to their involvement in daily operations; an extensive disclosure is not necessary. Second, as noted previously, family firms make effort to preserve their family SEW and could be reluctant to disclose more information than necessary. That is, although a lower level of information asymmetry may result from family firms' higher-quality accounting information, the nature of family involvement may lead family firms to disclose less, thus making the information asymmetry issue more severe. Like H1,

therefore, H2 is developed in two alternate forms, considering the previous argument.

H2a: Family-controlled entrepreneurial firms experience less difficulty in accessing foreign banks than do nonfamily-controlled ones.

H2b: Family-controlled entrepreneurial firms experience more difficulty in accessing foreign banks than do nonfamily-controlled ones.

The Effect of Adopting IAS on Global Transactions

The introduction and application of IAS/IFRS are “one of the most significant regulatory changes in accounting history” (Daske et al. 2008, p. 1086); more than 100 countries around the world have converged to IFRS. The implementation of IFRS is generally expected to lead to an improved information environment, such as higher quality financial statements, a lower level of information asymmetry, and a higher level of information precision (Armstrong et al. 2010). Barth, Landsman, and Lang (2008), for instance, confirm that firms from countries in which IAS is adopted show higher-quality accounting information, such as engagement in a lower level of earnings management. Since our focus is on the influence of adopting IAS on entrepreneurial firms’ access to international banks, now we turn to the particular roles IAS/IFRS plays in promoting global transactions, especially in promoting the flow of capital across borders.

Mccreevy (2005), the then European Commissioner for Internal Market and Services, was quoted in Beneish, Miller, and Yohn (2009) as saying that the convergence to IFRS would lead to “greater cross-border investment.” This seems plausible, as information processing/acquisition costs in global markets have long been found to contribute to home bias in which investors avoid global investment (Kang and Stulz 1997). Portes and Rey (2005) claim that information costs are the main determinant of cross-border equity flows. Bae, Tan, and Welker (2008) provide supporting evidence that GAAP differences increase the cost of “collecting, analyzing, and disseminating financial information” (p. 594); therefore, a single set of high-quality accounting standards, such as the IAS/IFRS, should be able to reduce such information cost.

Various studies confirm the positive role played by IAS/IFRS adoption on promoting cross-border flow of capital. Covrig, Defond, and Hung (2007) find that compared with firms using local accounting standards, firms using IAS/IFRS have a significantly higher foreign mutual fund ownership, suggesting that foreign institutional investors show a stronger preference for IAS/IFRS adopters. Consistent with IAS/IFRS improving information environment, the authors find that firms adopting IAS/IFRS yet operating in a poor information environment have a higher foreign mutual fund ownership. Unlike Covrig, Defond, and Hung (2007) using a sample of firms voluntarily adopting IAS/IFRS, DeFond et al. (2011) focus on the mandatory nature of IAS/IFRS adoption. As expected, they confirm the findings reported by Covrig, Defond, and Hung (2007) through showing that foreign investment increases when the adoption of IAS/IFRS results in improved comparability. Employing data from over 144,000 institutional investors, Florou and Pope (2009) document again the positive association between IFRS adoption and equity ownership increase. In another study, Lee and Fargher (2010) provide consistent evidence by examining foreign equity investment held by Australian investors. Yu (2010) calculates “accounting distance” in her dissertation following Bae, Tan, and Welker (2008), and finds that foreign mutual funds increase their holdings of IAS/IFRS adopters, consistent with the IAS/IFRS adoption lowering information cost.

Supporting evidence is not limited to institutional investors. Brüggemann et al. (2009) find that like institutional investors, individual investors react positively to global IAS/IFRS adoption as well. Mandatory adoption of IAS/IFRS has seen an increase in trading activity; the increase is found to be both economically and statistically significant. Different from prior studies, Ding, Chen, and Xu (2010) use country-level data to explore the effect of IAS/IFRS adoption; they find that the convergence to IAS/IFRS in 30 countries promotes foreign direct investment. Aggarwal, Klapper, and Wysocki (2005) examine investment allocations of U.S. mutual funds in emerging markets by focusing on accounting standards at the country-level and accounting disclosure at the firm level; they find that better accounting standards and more transparent disclosure help attract international investment. Beneish, Miller, and Yohn (2009) find that compared

with non-IAS/IFRS ones, countries that mandated IAS/IFRS adoption fail to show a greater ability to attract foreign equity investment, but such countries are successful in attracting more debts.

In sum, IAS/IFRS adoption is generally found to enhance global investment by promoting cross-border equity holdings and debt investment.³ We posit that small firms adopting IAS experience fewer obstacles accessing international lenders, such as foreign banks. The third hypothesis is developed as follows:

H3: Entrepreneurial firms adopting IAS voluntarily experience fewer obstacles accessing foreign banks than do their non-IAS counterparts.

Joint Effect of IAS Adoption and Family Control on Access to Foreign Debt

We posit in H3 that entrepreneurial firms, both family-controlled and nonfamily-controlled firms, may experience less difficulty receiving loans from foreign banks if they adopt IAS voluntarily. We argue, however, that IAS adoption may not affect these two groups of firms equally. First, family firms are well known for their higher-quality accounting information even without adopting IAS; as a result, the improvement in information quality in family firms may benefit from a switching from a local GAAP to IAS to a lesser extent. Put it differently, this initial accounting information quality in family firms determines the room for further improvement. On the other hand, nonfamily firms are expected to significantly improve their accounting information quality after switching to IAS. Nonfamily firms provide lower-quality accounting information when applying the local GAAP; switching to IAS should benefit these firms the most. We therefore predict that IAS adoption interacts with family control to impact the difficulty in accessing foreign debt. Hence, H4 is developed as follows:

H4: IAS adoption interacts with family control to influence entrepreneurial firms' access to foreign banks such that nonfamily firms benefit more from switching to IAS.

Data and Methodology

Sample

The sample used for this study consists of entrepreneurial firms in 80 countries and one territory drawn from the WBES conducted in 2,000 by the World Bank in order to address firms' perceptions of business environment. Due to the rich information provided, the WBES database has been used in previous studies such as Barth et al. (2009) and Fan, Lin, and Treisman (2009). This database is eligible for this study, which focuses on the joint effects of family control and IAS adoption on access to foreign banks, by providing international evidence mainly for two reasons. First, it contains rich information about firm characteristics including firm size and firm age; ownership features including foreign ownership, government ownership, and ownership concentration; regulatory information in each country; macroeconomic stability; and so on. These groups of factors allow us to test the four hypotheses proposed in the second section and provide valid findings. Second, the survey ensures a high degree of comparability across countries because all of them were conducted by the World Bank using the same methodology. This feature enables us to interpret international evidence drawn from this sample of entrepreneurial firms reliably.

The sample consists of 6,950 entrepreneurial firms from more than 80 countries, and details about sample distribution in each of these countries are reported in Table 1, in which numbers of family-controlled firms, nonfamily-controlled firms, firms that have adopted IAS, and firms that have not adopted IAS in each country are respectively presented in Table 1 as well.

Variables

Dependent Variable. The dependent variable *FORBANK* is a dummy variable with a value of 1 if a firm has minor or no obstacle to gain access to foreign banks, and 0 if it has modest or major obstacle. As discussed earlier, financing is critical for entrepreneurial firms to survive and grow, and debt financing is even more important because it is very hard for them to obtain equity financing. Thus, access to

³Contradictory evidence exists, suggesting that the positive association of IAS/IFRS adoption and global capital flow is more complicated (e.g., Shima and Gordon 2011).

Table 1
Sample Distribution

	Total	Nonfamily	Family	Non-IAS	IAS	Total	Nonfamily	Family	Non-IAS	IAS
Albania	90	78	6	34	49	39	35	4	30	8
Argentina	93	79	12	40	38	84	58	24	71	7
Armenia	63	56	7	45	16	77	58	17	16	58
Azerbaijan	83	54	29	72	11	29	24	2	2	26
Bangladesh	32	27	5	7	21	75	64	11	59	11
Belarus	43	40	3	33	8	93	70	15	24	66
Belize	42	37	3	15	20	37	32	5	9	25
Bolivia	88	72	14	25	58	60	52	6	8	49
Bosnia	52	44	8	19	29	85	82	2	37	36
Botswana	74	68	3	7	64	79	64	11	6	67
Brazil	191	133	54	70	96	96	82	10	34	55
Bulgaria	76	69	7	66	10	91	77	11	19	69
Cambodia	287	216	68	213	65	86	74	11	37	45
Cameroon	50	40	8	2	44	89	89	22	62	24
Canada	86	77	8	42	32	137	129	8	98	21
Chile	78	56	17	26	48	86	70	14	13	68
China	38	37	1	34	3	83	77	6	57	14
Colombia	83	76	5	26	52	257	235	16	215	25
Costa Rica	83	68	7	11	61	65	46	8	16	36
Cote d'Ivoire	68	57	3	2	65	86	75	10	27	58
Croatia	34	30	4	1	31	76	72	3	64	4
Czech Republic	100	94	5	78	11	40	32	8	19	18
Dominican Republic	97	74	20	26	62	105	93	8	9	93
Ecuador	94	62	29	43	47	91	70	10	58	26
Egypt	91	82	6	36	55	82	66	12	11	61
El_Salvador	99	93	5	45	46	40	30	8	5	34
Estonia	70	68	0	25	39	358	330	26	148	200
Ethiopia	82	67	12	14	63	91	55	36	19	66
France	84	73	11	47	28	26	18	6	3	22
Georgia	72	67	5	42	30	122	92	30	62	55
Germany	77	74	3	35	30	89	69	12	21	66
Ghana	92	77	9	18	66	89	66	11	71	11
Guatemala	83	73	8	34	32	123	116	7	104	11
Haiti	93	84	7	32	58	89	61	28	29	53
Honduras	80	71	5	18	52	85	74	8	61	8
Hungary	80	61	18	53	17	37	31	6	30	5
India	21	16	4	6	15	94	65	25	23	66
Indonesia	66	53	13	41	21	78	57	21	50	23
Italy	86	82	4	37	40	57	42	12	5	49
Kazakhstan	49	42	3	18	29	118	92	22	12	101
Kenya	76	58	13	8	63					

Table 2
Descriptive Statistics

	Full Sample			Family-Controlled Firms			Nonfamily Controlled Firms		
	Mean	S.D.	N	Mean	S.D.	N	Mean	S.D.	N
<i>FORBANK</i>	0.66	0.47	5,182	0.62	0.49	743	0.67	0.47	4,439
<i>IAS</i>	0.52	0.5	6,282	0.44	0.5	899	0.53	0.5	5,383
<i>FAMILY</i>	0.14	0.35	6,762	—	—	—	—	—	—
<i>LNSALES</i>	11.47	7.5	5,467	11.57	6.86	792	11.45	7.61	4,675
<i>FIRMAGE</i>	17.39	23.34	6,665	20.61	21.74	960	16.85	23.56	5,705
<i>FOROP</i>	0.19	0.39	4,592	0.11	0.31	631	0.2	0.4	3,961
<i>LEVERAGE</i>	1.79	3.31	4,917	1.44	2.87	712	1.85	3.37	4,205
<i>CREDITOR</i>	2.31	1.45	2,839	2.26	1.46	448	2.32	1.44	2,391
<i>OWNCON</i>	48.78	43.52	6,670	55.3	43.78	958	47.75	43.39	5,712
<i>FOROWN</i>	0.18	0.39	6,665	0.07	0.25	959	0.2	0.4	5,706
<i>GOVOWN</i>	0.02	0.14	5,325	0.01	0.07	777	0.02	0.14	4,548
<i>FOREXREG</i>	1.98	1.05	6,650	2.02	1.1	951	1.97	1.05	5,699
<i>REGAVA</i>	3	1.42	6,649	3.15	1.42	953	2.97	1.41	5,696
<i>REGINT</i>	3.36	1.37	5,156	3.53	1.37	725	3.33	1.37	4,431
<i>ECOPRE</i>	3.86	1.3	6,406	3.83	1.36	944	3.86	1.29	5,462
<i>JUDCONF</i>	3.27	1.44	6,762	3.31	1.42	975	3.27	1.44	5,787
<i>VOACCT</i>	0.06	0.79	6,762	0.01	0.78	975	0.06	0.79	5,787
<i>POLSTA</i>	-0.15	0.81	6,762	-0.22	0.81	975	-0.13	0.81	5,787
<i>GOVEFF</i>	0	0.85	6,762	-0.05	0.84	975	0	0.85	5,787
<i>REGQUA</i>	0.13	0.76	6,762	0.12	0.75	975	0.14	0.76	5,787
<i>RULLAW</i>	-0.12	0.86	6,762	-0.14	0.82	975	-0.12	0.86	5,787
<i>CTLCOR</i>	-0.11	0.9	6,762	-0.13	0.89	975	-0.11	0.9	5,787
<i>TOTAL</i>	-0.2	4.68	6,762	-0.42	4.62	975	-0.16	4.69	5,787

IAS is a dummy variable indicating whether a firm has adopted International Accounting Standards; *FAMILY* is dummy variable indicating whether major decisions of a firm are controlled by a family; *FORBANK* is a dummy variable indicating whether a firm has access to foreign loans. Firm characteristic variables include *LNSALES*, *FIRMAGE*, *FOROP*, *OWNCON*, *FOROWN*, *GOVOWN*, and *LEVERAGE*, whereas country characteristic variables include *FOREXREG*, *REGAVA*, *REGINT*, *ECOPRE*, and *JUDCONF*. *TOTAL* is the World Governance Indicator (Kaufmann, Kraay, and Mastruzzi 2003) that has components measuring six dimensions of country governance, namely *VOACCT*, *POLSTA*, *GOVEFF*, *REGQUA*, *RULLAW*, and *CTLCOR*.

foreign banks not only helps entrepreneurial firms finance but also serves as a strong signal to potential capital suppliers for future financing. Descriptive statistics presented in Table 2 show that 66 percent of the sample entrepreneurial firms have either no or minor obstacle in accessing foreign banks, but 34 percent have modest or major obstacle. In family-controlled entrepreneurial firms, 62 percent have no or minor obstacle, and 67 percent in nonfamily-controlled ones. The mean values of *FORBANK*

in these two sub-samples are significantly different ($t = 2.37$ and $p < .01$)

IAS is a dummy variable indicating whether a firm has adopted IAS/IFRS. It has a value of 1 if yes, and 0 if no. As shown in Table 2, 52 percent of the international entrepreneurial firms, including 44 percent of family-controlled ones and 53 percent of nonfamily-controlled ones, adopted IAS. The compare-mean t-test shows that the means of *IAS* in these two sub-samples categorized by family

control are significantly different ($t = 5.02$ and $p < .001$).

Independent Variable. Since the objective of this study is to investigate the joint effects of family control and adoption of IAS on entrepreneurial firms' access to foreign banks, the independent variable is *FAMILY*, a dummy variable indicating whether major decisions of a firm are controlled by a family. This definition of family firms is consistent with previous studies such as Chua, Chrisman, and Sharma (1999) and Chua et al. (2011). As discussed by Chua, Chrisman, and Sharma (1999), family involvement may include four dimensions such as ownership, management, governance, and intention for succession, and Chua et al. (2011) examine the impacts of these four dimensions on the use of debt financing. However, though it is hard to measure intention for succession, family control usually takes into consideration the other three dimensions (Wu, Chua, and Chrisman 2007; Wu, Hedges, and Zhang 2007). In the full sample of international entrepreneurial firms, 14 percent are controlled by families.

Control Variables. Following existing studies in the relevant literature (e.g., Wu, Chua, and Chrisman 2007; Francis et al. 2008; Chua et al. 2011; Ding, Qu, and Wu 2015), we take into consideration four groups of control variables, such as firm characteristics, ownership features, regulations and policies in various countries, and country-level macro-governance, as well as six industry dummies controlling for industry fixed effects and seven regional dummies controlling for the geographical fixed effects in the world economy.⁴

Firm Characteristics. Four variables are adopted to measure firm characteristics. The first one is *LNSALES*, which characterizes firm size, measured by the logarithm value of total sales. The mean value of *LNSALES* is 11.47. Furthermore, the size of an average family-controlled entrepreneurial firm (mean value 11.57) is slightly larger than that of an average nonfamily-controlled one (mean value 11.45), but their difference is insignificant. The second

variable in this group is *FIRMAGE* measuring the age of firm in years. It is one of the most straightforward measures of firm maturity (Fritsch and Mueller 2004), and the average age of entrepreneurial firms in the sample is 17.39 years. An average family-controlled entrepreneurial firm (mean value 20.61) is 3.76 years older than an average nonfamily-controlled one (mean value 16.85). We also separate relatively mature firms from younger ones using the firm age of 10 following previous studies in the literature (Chua, Wilson, and Wu 2012; Fritsch and Mueller 2004), and doing so gives us 39 percent of the entrepreneurial firms in the full sample as relatively mature ones, with 49 percent in family-controlled ones and 37 percent in nonfamily-controlled ones. The third firm characteristics variable is *FOROP*, a dummy variable with a value of 1 if an entrepreneurial firm operates in other countries and 0 otherwise. In the full sample, 19 percent of them operated in foreign countries. Among family-controlled entrepreneurial firms, 11 percent had operations in other countries, whereas 20 percent of nonfamily-controlled entrepreneurial firms did so. This indicates that family-controlled entrepreneurial firms are significantly less likely to internationalize themselves than nonfamily-controlled ones ($t = 6.66$ and $p < .001$) because they tend to take lower risk (Gómez-Mejía, Makri, and Larrazza-Kintana 2010; Gómez-Mejía et al. 2007). The last variable is *LEVERAGE*, which is proxied by debt over fixed assets since WBES 2000 database does not provide information about firm's total assets. The average debt to fixed asset ratio in the full sample is 1.79, whereas nonfamily subsample has an insignificantly higher leverage of 1.85 than that of the family subsample, which is 1.44.

Ownership Features. Three variables are adopted to characterize the ownership features of an entrepreneurial firm. The first one is ownership concentration (*OWNCON*) which is measured by the total ownership held by the three largest shareholders. In the full sample, a total of 48.78 percent of the share ownership in an average entrepreneurial firm is held by the

⁴The industry dummies represent (1) manufacturing; (2) services; (3) commerce; (4) agriculture, hunting, fishing, and forestry; (5) mining and quarrying; (6) electricity, gas, and water; and (7) construction. The seven region dummies represent Africa, Mediterranean and North Africa, Transition Europe, East Asia, South Asia, Latin America, and OECD, respectively.

three largest shareholders. Family-controlled firms tend to have a higher level of ownership concentration with an average 55.30 percent, whereas nonfamily-controlled firms have on average 47.75 percent of ownership held by the three largest shareholders; the difference between these two mean values is significant at the 0.1 percent level ($t = 4.06$). This phenomenon is consistent with the evidence presented in the family business management literature (Chua, Chrisman, and Sharma 1999). Since this study focuses on entrepreneurial firms' access to foreign banks, we also take into consideration two other ownership measures, ownership held by foreign investors (*FOROWN*) and that held by government (*GOVOWN*). Both of them are dummy variables indicating whether an entrepreneurial firm has foreign investors and government, respectively, holding its shares. The descriptive statistics reported in Table 2 tell that on average, 18 percent of the entrepreneurial firms in the full sample have their shares held by foreign investors, and only 2 percent have shares held by government. What is interesting is that family-controlled firms (mean value of *FOROWN* 7 percent) are significantly less likely ($t = 9.89$ and $p < .001$) to have foreign investors holding share ownership than nonfamily-controlled ones (mean value of *FOROWN* 20 percent). This is consistent with what Gómez-Mejía, Makri, and Larraza-Kintana (2010) report about family firm's internationalization. Similarly, family-controlled firms (mean value of *GOVOWN* 1 percent) are significantly less likely ($t = 3.34$ and $p < .001$) to have government holding share ownership than nonfamily-controlled ones (mean value of *GOVOWN* 2 percent). One of the interpretations is that family-controlled firms tend to have more social capital associated with family members they can borrow, but nonfamily-controlled firms have disadvantages in this regard and therefore tend to rely more on the government to obtain resources (Chua et al. 2011).

Regulations and Policies in Various Countries. This study addresses the relationship between accounting regulation and entrepreneurial firms' internationalization in terms of financing from foreign banks. Hence, relevant regulation and policy factors need to be taken into account in the analysis, and we use three variables to capture them. The first variable is *FOREXREG*, a categorical variable measuring

how problematic a country's foreign currency and exchange regulations are for firm's operation and growth. Four categories with values 1–4 are used to indicate no obstacle, minor obstacle, moderate obstacle, and major obstacle, respectively. In the full sample of international entrepreneurial firms, an average one faces minor obstacle (mean value of *FOREXREG* 1.98), so does an average entrepreneurial firm in both sub-samples categorized by family control (2.02 in family-controlled firms and 1.97 in nonfamily-controlled ones). The second variable *REGAVA* is a categorical variable measuring how easy it is for a firm to obtain information on laws and regulations, and it has six categories with the value of 1 indicating that it is very easy and the value of 6 indicating that it is very difficult. In the full sample, an average entrepreneurial firm (mean value of *REGAVA* 3.00) tends to agree that it is easy to obtain the information on regulations. On average, however, nonfamily-controlled entrepreneurial firms (mean value 2.97) find it is easier to obtain the information than family-controlled ones (mean value 3.15; $t = 3.64$ and $p < .001$). The third variable is *REGINT*, which is a categorical variable measuring how consistent and predictable the interpretations of regulations are in a country. It also has six categories with the value of 1 indicating that it is very consistent and predictable and with the value of 6 indicating exactly the opposite. The mean value of *REGINT* in the full sample is 3.36, whereas its mean values in the sub-samples consisting of family-controlled and nonfamily-controlled firms are 3.53 and 3.33, respectively; the difference is significant at the 0.1 percent level ($t = 4.30$). These indicate that family-controlled firms tend to emerge in countries whose interpretations of regulations are less consistent and predictable.

Country-Level Macro-Governance. This group consists of four variables. The variable *ECOPRE* is a categorical variable measuring how predictable unexpected changes in economic and financial policies are in a country. Six categories with values 1–6 are considered, where the value of 1 means completely predictable and six means completely unpredictable. An average firm exists in a country with changes in economic and financial policies fairly unpredictable (mean value 3.86), so do both the average family-controlled firm and the average nonfamily-controlled firm. The second variable

JUDCONF is a categorical variable characterizing the extent to which a firm is confident in its country's judicial system. It also has six categories with the value of 1 indicating entrepreneur's full confidence in his/her country's judicial system and the value of six indicating exactly the opposite. Its mean in the full sample is 3.27 indicating that entrepreneurs tend to be confident, and this is also the situation in both family-controlled and nonfamily-controlled sub-samples.

Note that the thresholds of categorical variables listed such as *REGAVA*, *REGINT*, *ECOPRE*, and *JUDCONF* are determined in the WBES, and no objective values for these thresholds are provided by the survey organizer. To avoid potential biases caused by these relatively subjective measures, we take into consideration continuous variables based on the Worldwide Governance created by Kaufmann, Kraay, and Mastruzzi (2003) and published by the World Bank. These indicators are used to characterize country-level macro-governance mechanism in the globe. They are named *VOACCT*, *POLSTA*, *GOVEFF*, *REGQUA*, *RULLAW*, and *CTLCOR*, and they are continuous variables characterizing voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption, respectively. Each of them has a value ranging from -2.5 to 2.5 with higher values indicating better governance mechanisms in its respective regard (Kaufmann, Kraay, and Mastruzzi 2003). We also include the sum of these six indicators (*TOTAL*) for robustness checks, and its value ranges from -15 to 15. In the full sample, as presented in Table 2, the mean of *TOTAL* is -0.20, with -0.42 in the sub-sample of family-controlled firms and 0.16 in that of nonfamily-controlled firms. These descriptives tell that family control seems more likely to occur in countries with lower levels of macro-governance mechanisms. The last variable is creditor protection indicator developed by La Porta et al. (1998, LLSV hereafter). The indicator is scaled from 0 to 4 with 0 indicating no creditor protection and 4 suggesting protection of creditors in all four aspects specified by LLSV. LLSV has creditor protector indicator for 49 countries, and among these countries, only 30 are included in our sample. We only include this variable in our robustness check.

For the sake of readers' convenience, we list the variables adopted by this study and their

definitions in Table 3, followed by Table 4 in which the correlations are reported. To spare space, they are not repeated here.

Model

After conducting univariate analysis, we consider the baseline logistic model:

$$FORBANK = a_0 + a_1 \times FAMILY + a_2 \times IAS + a_3 \times Control + \varepsilon_1 \quad (1)$$

To investigate the joint effects of family control and adoption of IAS, a more realistic analysis should take into account the interaction between these two factors, and therefore, a more complex logistic model is

$$FORBANK = b_0 + b_1 \times FAMILY + b_2 \times IAS + b_3 \times FAMILY \times IAS + b_4 \times Control + \varepsilon_2 \quad (2)$$

As addressed earlier, an entrepreneurial firms' decision of adopting IAS is endogenous. Therefore, a two-stage probit analysis should be used in order to cope with potential biases caused by this issue. To capture the impact of family control on the adoption of IAS, we use the following first-stage probit model since the variable IAS is a dummy:

$$IAS = c_0 + c_1 \times FAMILY + c_2 \times Control + \varepsilon_3 \quad (3)$$

Then, we follow Kim and Shi (2012) to estimate the fitted value of IAS from model (3) by naming the variable *IAS-f*, and transform it to the Inverse Mill's ratio (IMR), for various forms of the second-stage probit models:

$$FORBANK = d_0 + d_1 \times FAMILY + d_2 \times IAS-f + d_3 \times FAMILY \times IAS-f + d_4 \times Control + \varepsilon_4 \quad (4)$$

$$FORBANK = e_0 + e_1 \times FAMILY + e_2 \times IAS + e_3 \times FAMILY \times IAS + e_4 \times IMR + e_5 \times Control + \varepsilon_5 \quad (5)$$

Though models (4) and (5) serve as robustness tests for each other, various groups of control variables are also considered to ensure the findings to be robust. We also follow previous studies (Kim and Shi 2012) to make use of the propensity score matching (PSM) approach for robustness check.

Table 3
Variable Definition

Variable	Definition
<i>FORBANK</i>	A dummy variable with a value of 1 if a firm has minor or no obstacle to access foreign bank, and 0 if it has modest or major obstacle
<i>IAS</i>	A dummy variable indicating whether a firm has adopted International Accounting Standards
<i>FAMILY</i>	A dummy variable indicating whether major decisions of a firm are controlled by a family
<i>LNSALES</i>	Logarithm value of total sales
<i>FIRMAGE</i>	Age of a firm measured by the number of year a firm has been in business
<i>FOROP</i>	A dummy variable indicating whether a firm operates in other countries
<i>OWNCON</i>	Percentage of ownership held by the three largest shareholders
<i>FOROWN</i>	A dummy variable indicating whether a firm has foreign investors
<i>GOVOWN</i>	A dummy variable indicating whether a firm has government ownership
<i>FOREXREG</i>	A categorical variable measuring how problematic a country's foreign currency and exchange regulations are for firm's operation and growth
<i>REGAVA</i>	A categorical variable measuring how easy a firm can obtain laws and regulations
<i>REGINT</i>	A categorical variable measuring how consistent and predicible the interpretations of regulations in a country
<i>ECOPRE</i>	A categorical variable measuring how predictable unexpected changes in economic and financial policies in a country
<i>JUDCONF</i>	A categorical variable measuring how firm is confident in its country's judicial system
<i>VOACCT</i>	A continuous variable characterizing country-level macro-governance with respect to voice and accountability
<i>POLSTA</i>	A continuous variable characterizing country-level macro-governance with respect to political stability and absence of violence
<i>GOVEFF</i>	A continuous variable characterizing country-level macro-governance with respect to government effectiveness
<i>REGQUA</i>	A continuous variable characterizing country-level macro-governance with respect to regulatory quality
<i>RULLAW</i>	A continuous variable characterizing country-level macro-governance with respect to rule of law
<i>CTLCOR</i>	A continuous variable characterizing country-level macro-governance with respect to control of corruption
<i>TOTAL</i>	A continuous variable characterizing country-level macro-governance with respect to all six dimensions of indicators

Following Kim and Shi (2012), we test the probit model (3) using the full sample and estimate each firm's propensity score of adopting IAS, where the propensity score is the estimated likelihood of adopting IAS based on the firm characteristics specified in model (3). We then divide the full sample into two sub-samples: the IAS sub-sample is composed of firms reportedly adopting IAS, that is, with the dummy variable IAS equal to 1, and the non-IAS

sub-sample consists of firms not adopting IAS. We apply an algorithm that matches IAS firms with non-IAS firms based on the closest propensity score sorted by countries and industries/sectors. For instance, for an IAS firm that has the greatest propensity score in a certain industry of a certain country, we select the firm that also has the greatest propensity score in the same country-industry, but from the non-IAS sub-sample, to match with this firm. If the difference

Table 4
Correlation

Label	<i>IAS</i>	<i>FAMILY</i>	<i>LNSALES</i>	<i>FIRMAGE</i>	<i>FOROP</i>	<i>OWNCON</i>	<i>FOROWN</i>	<i>GOVOWN</i>	<i>LEVERAGE</i>	<i>FOREXREG</i>	<i>REGAVA</i>	<i>REGINT</i>	<i>ECOPRE</i>	<i>JUDCONF</i>	<i>TOTAL</i>
<i>FORBANK</i>	0.02	-0.03**	0.11***	0.10***	-0.08***	0.08***	0.13***	0.03*	0.01	-0.10***	-0.11***	-0.08***	-0.07***	-0.11***	0.23***
<i>IAS</i>		-0.06***	0.32***	0.18***	-0.27***	0.34***	0.28***	0.04***	-0.12***	0.04***	-0.05***	-0.02*	-0.09***	-0.07***	-0.02*
<i>FAMILY</i>			0.01	0.06***	0.08***	0.06***	-0.12***	-0.04***	-0.04***	0.02	0.04***	0.05***	-0.01	0.01	-0.02
<i>LNSALES</i>				0.33***	-0.24***	0.80***	0.23***	-0.01	-0.35***	0.08***	0.00	-0.01	-0.18***	-0.17***	0.22***
<i>FIRMAGE</i>					-0.18***	0.31***	0.11***	0.05***	-0.16***	0.02	-0.05***	0.04***	-0.10***	-0.10***	0.25***
<i>FOROP</i>						-0.21***	-0.40***	-0.02	0.09***	-0.02	0.05***	0.01	0.09***	0.06***	-0.07***
<i>OWNCON</i>							0.24***	0.01	-0.32***	0.04***	0.01	0.00	-0.19***	-0.14***	0.09***
<i>FOROWN</i>								0.04***	-0.08***	0.00	-0.05***	-0.01	-0.08***	-0.04***	0.04***
<i>GOVOWN</i>									-0.03**	-0.02	-0.05***	-0.03**	-0.03**	-0.04***	0.00
<i>LEVERAGE</i>										-0.05***	-0.02	-0.03**	-0.03**	-0.04***	0.00
<i>FOREXREG</i>											-0.02	-0.03**	0.10***	0.10***	-0.11***
<i>REGAVA</i>											0.12***	0.10***	0.05***	0.08***	-0.18***
<i>REGINT</i>												0.52***	0.17***	0.26***	-0.04***
<i>ECOPRE</i>													0.23***	0.30***	0.00
<i>JUDCONF</i>														0.27***	-0.14***
															-0.20***

* $p < .10$.

** $p < .05$.

*** $p < .01$.

IAS is a dummy variable indicating whether a firm has adopted International Accounting Standards; *FAMILY* is dummy variable indicating whether major decisions of a firm are controlled by a family; *FORBANK* is a dummy variable indicating whether a firm has access to foreign loans. Firm characteristic variables include *LNSALES*, *FIRMAGE*, *FOROP*, *OWNCON*, *FOROWN*, *GOVOWN*, and *LEVERAGE*, whereas country characteristic variables include *FOREXREG*, *REGAVA*, *REGINT*, *ECOPRE*, and *JUDCONF*. *TOTAL* is the World Governance Indicator (Kaufmann, Kraay, and Mastruzzi 2003) that has components measuring six dimensions of country governance, and since they are highly correlated, we only report the aggregate variable *TOTAL* in this table.

between propensity scores of these two firms is smaller than 0.05, the match is successful, and both firms enter into a new sample for the second-stage tests. If the difference is greater than 0.05, however, the match fails and both firms are dropped. We then continue to the firm with next highest propensity score from the IAS sub-sample and repeat the same procedure until we exhaust observations in the IAS sub-sample. The purpose of PSM method is to “correct” self-selection bias by identifying non-IAS firms that are closely similar to the IAS firms with respect to the likelihood of adopting IAS based on their firm characteristics. After forming the new sample based on PSM, we test the data by second-stage probit models, models (4) and (5). Since this two-stage probit model controls for self-selection bias, the parameter estimates on *FAMILY*, *IAS*, and the interaction term *FAMILY* × *IAS* serve the purpose of identifying effects of these factors on entrepreneurial firms’ access to foreign loans.

As further analysis, we also pinpoint different situations facing young and relatively mature entrepreneurial firms due to the liability of newness of young firms and the growth motivation of mature ones (Chua, Wilson, and Wu 2012). Therefore, we redo all the mentioned tests using two sub-samples categorized by age of firm. Following Fritsch and Mueller (2004) and Chua, Wilson, and Wu (2012), we consider firms that have been in business for at least 10 years to be relatively mature and those less than 10 years to be young firms. Using firm size may also divide our sample into sub-samples to further examine our research questions, but such division could be quite noisy in an international context. First, employee size is used by prior studies, but such scale lacks comparability across industries and different jurisdictions characterized by different economic development. Second, the book value of total assets is another popular measure of firm size, but it is an accounting number and could be affected by different GAAPs employed. Note that it is very hard to use firm size to measure firm maturity in this study using international data because various countries have different scales of firm size.

Findings and Robustness Tests **Impacts of Family Control on Adoption of IAS**

As just addressed, the univariate tests and models (1) and (2) without considering the

Table 5
Expected Signs of Coefficients
on Independent Variables

Dependent Variable	First Stage IAS	Second Stage FORBANK
<i>FAMILY</i>	+/-	+/-
<i>IAS</i>		+
<i>FAMILY</i> × <i>IAS</i>		-

Based on the hypotheses presented in the main text, we summarize the expected signs of coefficients on independent variables. H1a (H1b) expects positive (negative) relationship between family control and adoption of IAS. H2a (H2b) predicts positive (negative) relationship between family control and access to foreign bank loans. H3 predicts positive relationship between IAS and foreign bank loans. H4 expects that family firms benefit less than their nonfamily counterparts.

endogeneity of adopting IAS do not provide conclusive results, and therefore, we do not present them here in order to spare space. Instead, expected signs of coefficients on independent variables are presented in Table 5, and the empirical results from models (3) to (5) are reported in Tables 6–9, respectively.

Table 6 presents multiple sets of empirical results from the first-stage probit model (3). In both the full sample and sub-samples consisting of relatively mature and young firms, the coefficients on the variable *FAMILY* are negative and significant at the 1 percent level. In column (1), the coefficient on *FAMILY* is -0.62 ($p < .01$), and it tells that among global entrepreneurial firms, family-controlled ones are significantly less likely to adopt IAS voluntarily than nonfamily-controlled ones. This finding suggests that family-controlled firms tend not to disclose extensive information or make it transparent because doing so might compromise their SEW. Thus, H1b is not rejected, but H1a is. This finding also holds for both relatively mature and young entrepreneurial firms controlled by business families, as shown by the coefficient -0.52 ($p < .01$) on *FAMILY* in column (3) and by the coefficient -0.92 ($p < .01$) on *FAMILY* in column (5), respectively. These observations tell us that at all

Table 6
First-Stage Probit Model (3)

	Full Sample		Mature Firms		Young Firms	
	(1)	(2)	(3)	(4)	(5)	(6)
<i>FAMILY</i>	-0.37*** (0.06)	-0.40*** (0.07)	-0.33*** (0.08)	-0.36*** (0.09)	-0.52*** (0.10)	-0.54*** (0.12)
<i>LNSALES</i>	0.04*** (0.00)	0.05*** (0.00)	0.03*** (0.01)	0.03*** (0.01)	0.04*** (0.00)	0.05*** (0.00)
<i>FIRMAGE</i>	0.01*** (0.00)	0.00*** (0.00)	0.00** (0.00)	0.00* (0.00)	0.01 (0.01)	0.01 (0.01)
<i>REGAVA</i>	-0.03** (0.02)	-0.02 (0.02)	-0.02 (0.02)	-0.01 (0.03)	-0.04* (0.02)	-0.03 (0.03)
<i>REGINT</i>	0.02 (0.02)	0.01 (0.02)	0.02 (0.03)	0.02 (0.03)	0.01 (0.02)	0.00 (0.03)
<i>SALESGROWTH</i>		0.001*** (0.00)		0.001 (0.00)		0.001*** (0.00)
<i>LEVERAGE</i>		0.0001 (0.01)		0.02 (0.02)		0.0001 (0.01)
<i>INDUSTRY DUMMIES</i>	YES	YES	YES	YES	YES	YES
<i>CONSTANT</i>	-0.70*** (0.09)	-0.77*** (0.12)	-0.32** (0.15)	-0.40** (0.19)	-0.80*** (0.14)	-0.91*** (0.18)
Pseudo <i>R</i> ²	0.11	0.12	0.04	0.05	0.08	0.09
Log likelihood	-2785	-1,832.88	-1,339.23	-852.082	-1,425.49	-964.361
<i>N</i>	4,442	2,950	2,011	1,299	2,431	1,651

*10 percent significance, **5 percent significance, ***1 percent significance.

Standard errors are in parentheses. The dependent variable is *IAS*, a dummy variable indicating whether a firm has adopted International Accounting Standards, and the independent variable is *FAMILY* which is dummy variable indicating whether major decisions of a firm are controlled by a family. *FORBANK* is a dummy variable indicating whether a firm has access to foreign loans. Firm characteristic variables include *LNSALES*, *FIRMAGE*, *SALESGROWTH*, and *LEVERAGE*, whereas country characteristic variables include *REGAVA* and *REGINT*.

stages of development, entrepreneurial firms controlled by families tend to keep the information to themselves as much as they can.

To ensure the robustness of these findings, we also follow Kim and Shi (2012) and include two other control variables that measure sales growth (SG) and firm leverage⁵ (LEV). Retesting the first-stage probit model (3) using full samples and two sub-samples, we find no qualitative change in the impacts of family control on the adoption of IAS. In other words, the negative relationship between family control and adoption of IAS is confirmed.

Results presented in Table 6 also consistently show that firm size, firm age, and firm growth are positively associated with the probability of adopting IAS. All three variables characterize firm development to some degree and indicate that firms that are larger, older, and growing tend to share their information with the community in order to build their legend. Hence, these firms are more willing to adopt IAS in order to improve their corporate governance mechanisms and, consequently, acquire more financing including access to foreign banks. Multicollinearity may appear in models

⁵It is worth pointing out that the WBES 2000 database does not provide information about firm's total assets, and therefore, the financial leverage is proxied by the ratio between total liabilities and fixed assets. Consequently, unreasonable values of the variable *LEVERAGE* are excluded from the analysis.

Table 7
Second-Stage Probit Model (4): Full Sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>FAMILY</i>	0.248 (0.231)	0.224 (0.232)	0.036 (0.278)	0.012 (0.280)	0.226 (0.258)	0.031 (0.277)	0.292 (0.255)
<i>IAS-f</i>	2.918** (1.405)	2.695* (1.409)	2.386 (1.989)	1.811 (2.005)	4.356** (1.873)	2.018 (1.995)	4.718** (1.862)
<i>FAMILY</i> × <i>IAS-f</i>	0.243 (0.511)	0.254 (0.515)	0.567 (0.646)	0.396 (0.655)	0.714 (0.620)	0.449 (0.645)	0.732 (0.611)
<i>LNSALES</i>	-0.029 (0.024)	-0.025 (0.024)	-0.022 (0.035)	0.012 (0.039)	-0.040 (0.036)	0.003 (0.038)	-0.054 (0.036)
<i>FIRMAGE</i>	-0.001 (0.003)	-0.001 (0.003)	-0.003 (0.004)	-0.002 (0.004)	-0.006 (0.004)	-0.002 (0.004)	-0.007* (0.004)
<i>FOREXREG</i>	-0.238*** (0.023)	-0.238*** (0.024)	-0.236*** (0.030)	-0.233*** (0.030)		-0.218*** (0.029)	
<i>FOROWN</i>	0.345*** (0.072)	0.340*** (0.077)	0.381*** (0.094)	0.378*** (0.095)	0.373*** (0.091)	0.376*** (0.094)	0.378*** (0.090)
<i>LEVERAGE</i>	0.020*** (0.008)	0.021*** (0.008)	0.029*** (0.008)	0.029*** (0.008)	0.032*** (0.008)	0.031*** (0.008)	0.032*** (0.008)
<i>GOVOWN</i>		0.163 (0.191)	0.241 (0.247)	0.247 (0.250)	0.190 (0.235)	0.272 (0.250)	0.217 (0.235)
<i>FOROP</i>		0.054 (0.074)	-0.074 (0.094)	-0.108 (0.095)	-0.132 (0.092)	-0.088 (0.094)	-0.084 (0.090)
<i>OWNCON</i>			0.000 (0.002)	0.000 (0.002)	0.001 (0.002)	0.000 (0.002)	0.001 (0.002)
<i>ECOPRE</i>			-0.006 (0.024)	-0.004 (0.024)		-0.009 (0.024)	
<i>JUDCONF</i>			-0.044* (0.024)	-0.045* (0.024)		-0.057** (0.024)	
<i>VOACCT</i>			0.067 (0.105)	0.010 (0.113)	-0.016 (0.107)		
<i>POLSTA</i>			-0.245*** (0.077)	-0.268*** (0.080)	-0.266*** (0.076)		
<i>GOVEFF</i>			0.528*** (0.183)	0.849*** (0.208)	0.796*** (0.191)		
<i>REGQUA</i>			-0.308** (0.123)	-0.370*** (0.136)	-0.169 (0.123)		
<i>RULLAW</i>			0.060 (0.143)	-0.042 (0.166)	-0.162 (0.152)		
<i>CTLCOR</i>			0.094 (0.168)	0.067 (0.171)	0.152 (0.158)		
<i>TOTAL</i>						0.036*** (0.009)	0.050*** (0.008)
<i>INDUSTRY DUMMIES</i>	YES	YES	YES	YES	YES	YES	YES
<i>REGION DUMMIES</i>	NO	NO	NO	YES	YES	YES	YES
<i>CONSTANT</i>	-0.101 (0.334)	-0.058 (0.335)	0.186 (0.483)	-0.055 (0.536)	-1.197** (0.480)	0.106 (0.529)	-1.031** (0.475)
Log likelihood	-1,758.25	-1,737.12	-1,182.94	-1,173.4	-1,335.34	-1,190.93	-1,357.67
Pseudo R ²	0.07	0.07	0.11	0.12	0.10	0.10	0.08
<i>N</i>	2,922	2,893	2,011	2,011	2,234	2,011	2,234

*10 percent significance, **5 percent significance, ***1 percent significance.

Standard errors are in parentheses. The dependent variable is *FORBANK*, A dummy variable with a value of 1 if a firm has minor or no obstacle to access foreign bank, and 0 if it has modest or major obstacle. The independent variables are *IAS-f*, a fitted value of IAS from the first-stage probit model, *FAMILY* which is dummy variable indicating whether major decisions of a firm are controlled by a family, and the interaction between *IAS-f* and *FAMILY*.

Table 8
Second-Stage Probit Model (4): Subsamples of Mature and Young Firms

	Mature Firms				Young Firms			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>FAMILY</i>	1.784*** (0.479)	1.807*** (0.622)	1.654*** (0.596)	1.808*** (0.617)	-0.239 (0.323)	-0.375 (0.401)	0.065 (0.369)	-0.268 (0.395)
<i>IAS-f</i>	4.004** (1.802)	4.696 (3.133)	5.460* (3.029)	5.345* (3.107)	2.083 (2.367)	0.365 (2.781)	4.453* (2.521)	0.534 (2.758)
<i>FAMILY</i> × <i>IAS-f</i>	-2.77*** (0.878)	-2.666** (1.067)	-2.044** (1.014)	-2.395** (1.054)	1.058 (1.136)	1.058 (1.711)	0.346 (1.631)	-0.090 (1.676)
<i>LNSALES</i>	-0.037 (0.031)	0.012 (0.058)	-0.011 (0.056)	-0.016 (0.057)	-0.022 (0.039)	-0.015 (0.056)	-0.083* (0.050)	-0.017 (0.055)
<i>FIRMAGE</i>	-0.004 (0.003)	-0.009 (0.006)	-0.011* (0.006)	-0.011* (0.006)	-0.003 (0.015)	-0.028* (0.017)	-0.034** (0.016)	-0.026 (0.017)
<i>FOREXREG</i>	-0.27*** (0.036)	-0.26*** (0.054)		-0.243*** (0.052)	-0.221*** (0.032)	-0.243*** (0.038)		-0.215*** (0.036)
<i>FOROWN</i>	0.387*** (0.108)	0.475*** (0.146)	0.441*** (0.139)	0.489*** (0.143)	0.318*** (0.113)	0.331** (0.130)	0.314** (0.124)	0.348*** (0.129)
<i>LEVERAGE</i>	-0.026 (0.028)	0.024 (0.039)	0.021 (0.034)	0.024 (0.038)	0.025*** (0.008)	0.028*** (0.009)	0.032*** (0.008)	0.030*** (0.008)
<i>GOVOWN</i>	0.013 (0.257)	0.137 (0.388)	0.088 (0.371)	0.120 (0.388)	0.337 (0.287)	0.347 (0.333)	0.301 (0.309)	0.376 (0.333)
<i>FOROP</i>	0.068 (0.094)	-0.256** (0.129)	-0.277** (0.126)	-0.199 (0.126)	0.033 (0.123)	0.074 (0.149)	0.017 (0.141)	0.027 (0.147)
<i>OWNCON</i>		0.000 (0.002)	0.001 (0.002)	0.000 (0.002)		0.000 (0.004)	0.003 (0.004)	0.002 (0.004)
<i>ECOPRE</i>		-0.029 (0.045)		-0.019 (0.044)		-0.001 (0.029)		-0.008 (0.029)
<i>JUDCONF</i>		-0.080* (0.043)		-0.085** (0.042)		-0.023 (0.030)		-0.043 (0.029)
<i>VOACCT</i>		0.455* (0.240)	0.423* (0.225)			-0.127 (0.147)	-0.106 (0.136)	
<i>POLSTA</i>		-0.308* (0.159)	-0.245 (0.149)			-0.310*** (0.099)	-0.300*** (0.093)	
<i>GOVEFF</i>		1.095*** (0.396)	1.100*** (0.359)			0.801*** (0.258)	0.745*** (0.237)	
<i>REGQUA</i>		-0.540* (0.320)	-0.225 (0.286)			-0.318* (0.163)	-0.149 (0.147)	
<i>RULLAW</i>		-0.874*** (0.312)	-1.065*** (0.289)			0.385* (0.222)	0.214 (0.203)	
<i>CTLCOR</i>		0.467* (0.261)	0.471* (0.243)			-0.188 (0.247)	-0.069 (0.226)	
<i>TOTAL</i>				0.047*** (0.018)				0.037*** (0.010)
<i>INDUSTRY DUMMIES</i>	YES	YES	YES	YES	YES	YES	YES	YES
<i>REGION DUMMIES</i>	NO	YES	YES	YES	NO	YES	YES	YES
<i>CONSTANT</i>	-0.369 (0.464)	-0.888 (0.814)	-1.771** (0.752)	-0.951 (0.799)	0.028 (0.552)	0.748 (0.825)	-0.879 (0.719)	0.884 (0.810)
Log likelihood	-755.484	-385.704	-425.195	-395.413	-966.516	-761.349	-886.497	-775.365
Pseudo R ²	0.08	0.16	0.14	0.14	0.06	0.11	0.08	0.09
<i>N</i>	1,374	770	831	770	1,519	1,241	1,403	1,241

*10 percent significance, **5 percent significance, ***1 percent significance. Standard errors are in parentheses.

The dependent variable is *FORBANK*, a dummy variable with a value of 1 if a firm has minor or no obstacle to access foreign bank, and 0 if it has modest or major obstacle. The independent variables are *IAS-f*, a fitted value of IAS from the first-stage probit model, *FAMILY* which is dummy variable indicating whether major decisions of a firm are controlled by a family, and the interaction between *IAS-f* and *FAMILY*.

Table 9
Robustness Tests: Second-Stage Probit Model (5)

	Full Sample		Mature Firms		Young Firms	
	(1)	(2)	(3)	(4)	(5)	(6)
<i>FAMILY</i>	0.248 (0.208)	0.271 (0.208)	0.562* (0.296)	0.691** (0.299)	-0.114 (0.311)	-0.199 (0.315)
<i>IAS</i>	-0.010 (0.058)	0.041 (0.059)	0.165* (0.087)	0.248*** (0.091)	-0.137* (0.077)	-0.101 (0.079)
<i>FAMILY</i> × <i>IAS</i>	-0.021 (0.151)	-0.013 (0.152)	-0.371* (0.199)	-0.398** (0.202)	0.153 (0.287)	0.127 (0.291)
<i>IMR</i>	-4.932* (2.696)	-4.927* (2.707)	-5.034 (3.464)	-5.748 (3.504)	-3.137 (4.368)	-2.116 (4.418)
<i>LNSALES</i>	-0.020 (0.024)	-0.022 (0.026)	-0.015 (0.031)	-0.017 (0.034)	-0.009 (0.039)	-0.013 (0.043)
<i>FIRMAGE</i>	-0.001 (0.003)	-0.002 (0.003)	-0.002 (0.003)	-0.004 (0.003)	0.007 (0.015)	0.006 (0.015)
<i>LEVERAGE</i>	0.020** (0.008)	0.020** (0.008)	-0.014 (0.028)	-0.023 (0.028)	0.023*** (0.008)	0.024*** (0.008)
<i>FOREXREG</i>	-0.234*** (0.024)	-0.217*** (0.024)	-0.248*** (0.036)	-0.213*** (0.037)	-0.225*** (0.032)	-0.220*** (0.033)
<i>INDUSTRY DUMMIES</i>	YES	YES	YES	YES	YES	YES
<i>REGION DUMMIES</i>	NO	YES	NO	YES	NO	YES
<i>CONSTANT</i>	3.803** (1.772)	3.770** (1.784)	3.909* (2.254)	4.195* (2.288)	2.526 (2.881)	2.012 (2.933)
Log likelihood	-1,652.64	-1,620.8	-725.748	-702.969	-916.537	-904.5
Pseudo R^2	0.0604	0.082	0.0581	0.0908	0.0537	0.0694
<i>N</i>	2,728	2,728	1,292	1,292	1,436	1,436

*10 percent significance, **5 percent significance, ***1 percent significance. Standard errors are in parentheses.

The dependent variable is *FORBANK*, a dummy variable with a value of 1 if a firm has minor or no obstacle to access foreign bank, and 0 if it has modest or major obstacle. The independent variables are *IAS-f*, a fitted value of *IAS* from the first-stage probit model, *FAMILY* which is dummy variable indicating whether major decisions of a firm are controlled by a family, and the interaction between *IAS-f* and *FAMILY*.

with the interaction between *IAS-f* and *FAMILY*. A potential concern rooted in multicollinearity is that it may inflate standard errors of those variables and cause inappropriate significance of estimated parameters. We realize this potential issue and closely monitor variance inflation factors (VIFs), as well as standard errors of the coefficients. We detect that the VIF of this interactive term is below 10, indicating a multicollinearity related to it is not a serious concern. Meanwhile, standard errors of all the coefficients are not high and thus do not induce inappropriate significance. To further verify the

reliability of our empirical results, we follow Menard (2002) and standardize standard deviations of the independent variables, but doing so does not change our results qualitatively. Therefore, we conclude that multicollinearity is not a concern in this study.

Joint Effects of Family Control and Adoption of IAS on Access to Foreign Banks

Following the view of Kim and Shi (2012) that models (4) and (5) serve as robustness tests for each other, we present the empirical

results from model (4) in Tables 7–8 followed by Table 9, which presents the results from model (5).

Results from model (4) based on the full sample of global entrepreneurial firms, with various groups of control variables, are presented in columns (1)–(7) of Table 7. We find that though family control does not affect entrepreneurial firms' access to foreign banks, adoption of IAS enhances the access significantly. In general, the interactive effects of family control and adoption of IAS on firms' access to foreign banks are insignificant. These indicate that IAS adoption does help improve firm's information transparency significantly, and consequently standardizing accounting practices is positively recognized by foreign banks. Thus, H2a, H2b, and H4 are rejected, but H3 is not rejected.

Among relatively mature firms, the coefficients on variables *FAMILY* and the fitted value of *IAS* are both positive; with various groups of control variables being included in the analysis, these coefficients are significant either at the 5 percent or at the 1 percent level. In the meantime, the coefficients on the interaction between *FAMILY* and fitted value of *IAS* are significantly negative. These results are presented in columns (1)–(4) of Table 8. These indicate that both family control and adoption of IAS help increase entrepreneurial firms' access to foreign banks as long as such firms are relatively mature. Thus, positive signals carried by family control with respect to business families' SEW concerns and their better corporate governance mechanisms are recognized by foreign banks. Meanwhile, among entrepreneurial firms that have adopted IAS, nonfamily-controlled ones benefit more with respect to accessing foreign banks because there is more room for them to improve. Therefore, for relatively mature entrepreneurial firms, H2a, H3, and H4 are not rejected, but H2b is.

In contrast, none of the coefficients on *FAMILY*, fitted value of *IAS*, and their interaction in the sub-sample of young entrepreneurial firms are significant. These results are reported in the last four columns of Table 8 and indicate that the impacts of liability of newness dominate the positive effects of family control and information transparency rooted in adoption of

IAS. In short, H2a, H2b, H3, and H4 are rejected if young entrepreneurial firms are considered.

In both the full sample and two sub-samples, the coefficients on *FOROWN* are positive, and those on *FOREXREG* are negative, both significant at the 5 percent or at the 1 percent level. In these three samples, the coefficients on *TOTAL* are also positive and significant at the 1 percent level. These tell that entrepreneurial firms' access to foreign bank is improved by foreign ownership in a firm and favorable foreign currency and exchange regulations of a country. When a firm has foreign investors, the extent of informational asymmetry with foreign banks could be lower, partly because of the third-party certification provided by foreign investors. Also, favorable foreign currency and exchange regulations, as well as a country's overall macro-governance mechanism, signal lower political risk a foreign bank may face. In the full sample and the sub-sample consisting of relatively mature firms only, the coefficients on *JUDCONF* are significantly negative⁶ when the country-level macro-governance indicator *TOTAL* is included, indicating that confidence in a country's judicial system helps increase entrepreneurial firms' access to foreign banks. However, this effect is not observed in young firms due to the domination of their liability of newness.

Robustness tests based on two-staged probit models with IMR taken into consideration are presented in Table 9. Empirical results based on the full sample are presented in columns (1) and (2), those based on the sub-sample consisting of relatively mature firms are reported in columns (3) and (4), and those based on sub-sample of young firms are in the last two columns. No qualitative change has been found. Furthermore, the coefficients on IMR in both the full sample and the sub-sample of mature firms are significant; these indicate that self-selection is a significant concern which should be corrected. In the sub-sample consisting of young firms only, the coefficients on IMR are insignificant, which means that self-selection does not cause biases due to liability of newness. Empirical results, although not tabulated, based on the PSM method are also consistent with those presented in Tables 6–8.

⁶As described earlier, the variable *JUDCONF* characterizes the extent to which a firm is confident in its country's judicial system, and lower values indicate that entrepreneurs are more confident.

An additional set of robustness tests are based on the inclusion of credit protection indicators developed by La Porta et al. (1998). Note that their credit protection indicators cover 49 countries only, and only 30 of them are overlapping with our original sample withdrawn from the WBES dataset. No qualitative change has been found, and to conserve space, we do not tabulate these results although they are available upon request.

Conclusions, Limitations, and Future Research

Prior literature documents that publicly listed firms benefit from IAS/IFRS adoption through better access to international capital markets, as a result of increased accounting comparability and improved information quality. This study empirically investigates whether entrepreneurial firms in the private sector have the same experience. In particular, it explores the role family involvement plays in entrepreneurial firms' IAS adoption, and the effect of IAS adoption on these firms' likelihood in obtaining foreign debt financing, which is not yet examined by existing studies. We find that impacts of IAS adoption and family controllership on an entrepreneurial firm's likelihood in obtaining foreign funds are two-folded, and the effects may depend on the entrepreneurial firm's life cycle. On the one hand, IAS adoption and family control do improve the likelihood of mature entrepreneurial firms in obtaining foreign funds; they do not have any impact on young entrepreneurial firms, on the other hand. Furthermore, compared with nonfamily-controlled entrepreneurial firms, family-controlled ones, due to their initial high quality accounting, benefit from IAS adoption to a lesser extent in terms of their access to foreign banks. The findings provide entrepreneurs an alternative approach of mitigating lender-borrower agency conflicts rooted in the informational asymmetry between the two parties, because standardizing accounting practices with a high-quality international set is positively recognized by foreign banks. The joint effects of family control and IAS adoption also provide empirical evidence to accounting standard setters that further promotion of IAS will generally benefit entrepreneurial firms, and nonfamily-controlled entrepreneurial firms in particular. Consequently, the policymakers should facilitate the implementation of IAS in nonfamily-

controlled entrepreneurial firms. They also contribute to the entrepreneurship and family business literature by filling the gap of family involvement in the impact of IAS adoption on entrepreneurial firms' debt financing.

This study is also subject to several limitations. First, the coarse measurements from survey questionnaires may render noise in the findings. For instance, family ownership, family control, and family management are carefully distinguished in this line of literature. It may not be necessary to differentiate these measures in young firms. However, the distinction may have some implication on agency relationship in relatively mature entrepreneurial firms. Second, given the large number of countries in the sample, which may cause lack of degree of freedom if all country variables are coded in the model, we do not control for country effect directly. Instead, we control for region-industry effect. Countries in the same region may have different legal, political, and economic environment, and lack of country representation in the model may ignore the country fixed effect. To address this concern, we adopt six dimensions of, as well as the overall, country-level macro-governance indicators to control for country-specific effect. Third, the measure of access to foreign banks is, to some extent, ambiguous because no information about the reasons behind is provided. Little access to foreign banks may indicate that an entrepreneurial firm does not have effective channel to foreign funds, or that the firm is not interested in obtaining foreign funds, or that it does not need external financing at all. Put it differently, we are not sure if little access to foreign banks is supply or demand driven, which may have completely different meaning and implication for a model (Wu and Chua 2012). To mitigate this potential concern, we include in the model a control variable measuring SG in order to identify possible demands for external financing, but no qualitative change is found. Lastly, as mentioned earlier, we used WBES 2000 data, rather than a more recent survey, because the former data set contains two important variables of our interest: family control and IAS adoption. Nevertheless, the survey data in 2000 seems old, and future studies may conduct their own surveys to further study family firms' accounting choice and debt access to foreign capital. Furthermore, the "Doing Business" reports, also published by

the World Bank, provide useful information for studies like ours; future study may incorporate information provided by these reports.⁷

Further studies of entrepreneurial firms' debt financing along this line are required. An immediate future research, and also a significant contribution to the literature, can be one that disentangles supply and demand constraints in the accessibility to foreign debt. An alternative approach is to include a question asking respondents whether they have applied for loans to foreign banks.⁸ Doing so enables the researchers to deal with the potential self-selection issues. Another potential future research topic is to refine measures in the survey, such as the family-related measures that distinguish between family ownership and management, or between founding entrepreneurs and successors. It seems that both these two future research suggestions involve improvement in the design of survey questionnaires. The benefit for this research is obvious: The next round WBES will have a more precise portrait of the development in the entrepreneurial firms in the world. In addition, it will shed light on the vast literature of experiment design. A third potential direction of future studies is to explore the roles played by family involvement and IAS adoption in impacting cost of external financing, as well as in securing external equity financing. For instance, if a non-U.S. entrepreneurial firm goes to the U.S. stock markets to become publicly listed, does IAS adoption, jointly with family involvement, help its IPO valuation as the United States does not implement IAS mandatorily?

References

- Aggarwal, R., L. Klapper, and P. Wysocki (2005). "Portfolio Preferences of Foreign Institutional Investors," *Journal of Banking & Finance* 29, 2919–2946.
- Ali, A., T. Y. Chen, and S. Radhakrishnan (2007). "Corporate Disclosures by Family Firms," *Journal of Accounting and Economics* 44, 238–286.
- Armstrong, C., M. Barth, A. Jagolinzer, and E. Riedl (2010). "Market Reaction to the Adoption of IFRS in Europe," *The Accounting Review* 85(1), 31–61.
- Bae, K., H. Tan, and M. Welker (2008). "International GAAP Differences: The Impact on Foreign Analysts," *The Accounting Review* 83, 593–628.
- Barth, J., C. Lin, P. Lin, and F. Song (2009). "Corruption in Bank Lending to Firms: Cross-Country Micro Evidence on the Beneficial Role of Competition and Information Sharing," *Journal of Financial Economics* 91, 361–388.
- Barth, M., W. Landsman, and M. Lang (2008). "International Accounting Standards and Accounting Quality," *Journal of Accounting Research* 46, 467–498.
- Bassemir, M. (2012). "Why Do Private Firms Adopt IFRS?" Working Paper, Available at SSRN: <http://ssrn.com/abstract=1896283> or <http://dx.doi.org/10.2139/ssrn.1896283>, accessed on December 8, 2012.
- Beneish, M. D., B. Miller, and T. L. Yohn (2009). "IFRS Adoption and Cross-Border Investment in Equity and Debt Markets," Working Paper, available at SSRN: <http://ssrn.com/abstract=1403451>, accessed on December 8, 2012.
- Berger, A. N., and G. F. Udell (1995). "Relationship Lending and Lines of Credit in Small Firm Finance," *Journal of Business* 68, 351–381.
- (1998). "The Economics of Small Business Finance: The Roles of Private Equity and Debt Markets in the Financial Growth Cycle," *Journal of Banking and Finance* 22, 613–673.
- (2002). "Small Business Credit Availability and Relationship Lending: The Importance of Bank Organizational Structure," *The Economic Journal* 112, 32–53.
- Brüggenmann, U., H. Daske, C. Homburg, and P. F. Pope (2009). "How Do Individual Investors React to Global IFRS Adoption?" Working Paper, available at SSRN <http://ssrn.com/abstract=14058944>, accessed on December 8, 2012.
- Carsrud, A., and M. Brnnback (2010). "Entrepreneurial Motivations: What do We Still Need to Know?," *Journal of Small Business Management* 49, 9–26.
- Chen, D., S. Ding, and Z. Wu (2014). "Effect of Foreign Ownership on Cost Of Borrowing: Evidence from Small and Medium-Sized

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⁸The authors thank anonymous referees for bringing this to our attention.

- Enterprises in China,” *International Small Business Journal* 32, 693–715.
- Chen, S. P., X. Chen, and Q. Cheng (2008). “Do Family Firms Provide More or Less Voluntary Disclosure?,” *Journal of Accounting Research* 46, 499–536.
- Chrisman, J. J., J. H. Chua, and P. Sharma (2005). “Trends and Directions in the Development of a Strategic Management Theory of the Family Firm,” *Entrepreneurship Theory and Practice* 29(5), 555–576.
- Chrisman, J. J., P. Sharma, and S. Taggar (2007). “Family Influences on Firms: An Introduction,” *Journal of Business Research* 60, 1005–1011.
- Chua, J. H., J. J. Chrisman, and P. Sharma (1999). “Defining the Family Business by Behaviour,” *Entrepreneurship Theory and Practice* 23, 19–39.
- Chua, J. H., J. J. Chrisman, F. Kellermanns, and Z. Wu (2011). “Family Involvement and New Venture Debt Financing,” *Journal of Business Venturing* 26, 472–488.
- Chua, J. H., C. A. Wilson, and Z. Wu (2012). “Ownership Characteristics and the Borrowing Costs of Small Businesses: Maturity Matters,” Working Paper.
- Covrig, V., M. Defond, and M. Hung (2007). “Home Bias, Foreign Mutual Fund Holdings, and the Voluntary Adoption of International Accounting Standards,” *Journal of Accounting Research* 45, 41–70.
- Cucculelli, M. (2010). “Family Succession, New Product Introduction and the Business Cycle: Evidence from Longitudinal Data,” RENT XXIV, Research in Entrepreneurship and Small Business, Maastricht (NL), November 17–19.
- Daske, H., L. Hail, C. Leuz, and R. Verdi (2008). “Mandatory IFRS Reporting Around the World: Early Evidence on the Economic Consequences,” *Journal of Accounting Research* 46, 1085–1142.
- Defond, M., X. Hu, M. Hung, and S. Li (2011). “The Impact of Mandatory IFRS Adoption on Foreign Mutual Fund Ownership: The Role of Comparability,” *Journal of Accounting & Economics* 51, 240–258.
- Ding, S., and Z. Wu (2012). “Socioemotional Wealth and Family Firm Risk-Taking: The Case of Loan Applications,” Working Paper, presented at the 2012 Theories of Family Enterprise Conference, Edmonton, AB, Canada.
- Ding, S., B. Qu, and Z. Wu (2015). “Family Control, Socioemotional Wealth, and Governance Environment: The Case of Bribes,” *Journal of Business Ethics*, in press, DOI: 10.1007/s10551-015-2538-z.
- Ding, Y., C. Chen, and B. Xu (2010). “Convergence of Accounting Standards and Foreign Direct Investment,” Finance and Corporate Governance Conference 2011 Paper. Available at SSRN: <http://ssrn.com/abstract=1703549>, accessed on December 8, 2012.
- Fan, S., C. Lin, and D. Treisman (2009). “Political Decentralization and Corruption: Evidence from Around the World,” *Journal of Public Economics* 93, 14–34.
- Florou, A., and P. Pope (2009). “Mandatory IFRS Adoption and Investor Asset Allocation Decisions,” Working Paper, available at SSRN: <http://ssrn.com/abstract=1362564>, accessed on December 8, 2012.
- Francis, J., I. Khurana, X. Martin, and R. Pereira (2008). “The Role of Firm-Specific Incentives and Country Factors in Explaining Voluntary IAS Adoptions: Evidence from Private Firms,” *European Accounting Review* 17(2), 331–360.
- Fritsch, M., and P. Mueller (2004). “Effect of New Business Formation on Regional Development Over Time,” *Regional Studies* 38, 961–975.
- Gómez-Mejía, L. R., M. Makri, and M. Larraza-Kintana (2010). “Diversification Decisions in Family Controlled Firms,” *Journal of Management Studies* 47, 223–252.
- Gómez-Mejía, L. R., K. T. Haynes, M. Núñez-Nickel, J. L. K. Jacobson, and J. Moyano-Fuentes (2007). “Socioemotional Wealth and Business Risks in Family-Controlled Firms: Evidence from Spanish Olive Oil Mills,” *Administrative Science Quarterly* 52, 106–137.
- Gómez-Mejía, L. R., C. Cruz, P. Berrone, and J. Castro (2011). “The Bind that Ties: Socioemotional Wealth Preservation in Family Firms,” *The Academy of Management Annals* 5, 653–707.
- Jensen, M., and W. Meckling (1976). “Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure,” *Journal of Financial Economics* 3(4), 305–360.
- Kang, J. K., and R. M. Stulz (1997). “Why is there A Home Bias? An Analysis of Foreign Portfolio Equity Ownership in Japan,” *Journal of Financial Economics* 46, 3–28.

- Kaufmann, D., A. Kraay, and M. Mastruzzi (2003). "Governance Matters III: Governance Indicators for 1996–2002," *WBBER* 12(12), 1–122.
- Kim, J., and H. Shi (2012). "IFRS Reporting, Firm-Specific Information Flows, and Institutional Environments: International Evidence," *Review of Accounting Studies* 17, 474–517.
- Kotlar, J., and A. De Massis (2012). "Goal Setting in Family Firms: Goal Diversity, Social Interactions, and Collective Commitment to Family-Centered Goals," presented at the 2012 Theories of Family Enterprise Conference, Edmonton, AB, Canada.
- La Porta, R., F. Lopez-de-Silanes, and A. Shleifer (1999). "Corporate ownership around the world," *The Journal of Finance* 54, 471–517.
- La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. W. Vishny (1998). "Law and Finance," *Journal of Political Economy* 106, 1113–1155.
- Le Breton-Miller, I., and D. Miller (2006). "Why do Some Family Businesses Out-Compete? Governance, Long-Term Orientation, and Sustainable Capability," *Entrepreneurship Theory and Practice* 30, 731–746.
- Lee, G., and N. Fargher (2010). "Did the Adoption of IFRS Encourage Cross-Border Investment?" Working Paper, available at SSRN: <http://ssrn.com/abstract=1686571>, accessed on December 8, 2012.
- Mccreevy, C. (2005). "IFRS: No Pain, No Gain?" European Commissioner for Internal Market and Services Speech 05–621. Brussels.
- McMahon, R. G. P. (2001). "Business Growth and Performance and the Financial Reporting Practices of Australian Manufacturing SMEs," *Journal of Small Business Management* 39, 152–164.
- Markman, G. D., and R. A. Baron (2002). "Individual Differences and the Pursuit of New Ventures: A Model of Person-Entrepreneurship Fit," in *Advances in Entrepreneurship, Firm Emergence and Growth*, Vol. 5. Eds. J. A. Katz and T. M. Welbourne. Greenwich, CT: JAI Press Inc, 23–54.
- Menard, S. (2002). *Applied Logistic Regression Analysis*, 2nd ed. Thousand Oaks, CA: London: SAGE.
- Moore, K., and J. Mula (1993). *Managing and Controlling Family Owned Businesses: A Life Cycle Perspective of Australian Firms*. Gold Coast, Queensland: Research Report, Bond University.
- Pacter, P. (2009). "An IFRS for Private Entities," *International Journal of Disclosure and Governance* 6, 4–20.
- Pearson, A. W., J. C. Carr, and J. C. Shaw (2008). "Toward a Theory of Familiness: A Social Capital Perspective," *Entrepreneurship Theory and Practice* 32, 949–969.
- Petersen, M. A., and R. G. Rajan (1994). "The Benefits of Lending Relationships: Evidence from Small Business Data," *Journal of Finance* 49, 3–37.
- (1995). "The Effect of Credit Market Competition on Lending Relationships," *Quarterly Journal of Economics* 110, 407–443.
- Portes, R., and H. Rey (2005). "The Determinants of Cross-Border Equity Flows," *Journal of International Economics* 65, 269–296.
- PricewaterhouseCoopers LLP (2009). "Accounting Standards for Private Enterprises (ASPE) or IFRS?" <http://www.pwc.com/ca/en/private-company/publications/aspe-or-ifrs-2011-03-en.pdf>, accessed on December 8, 2012.
- Shane, S. (2000). "The Promise of Entrepreneurship as a Field of Research," *Academy of Management Review* 25(1), 217–226.
- Sharma, P., J. J. Chrisman, and J. H. Chua (1997). "Strategic Management of the Family Business: Past Research and Future Challenges," *Family Business Review* 10(1), 1–36.
- Shima, K., and E. Gordon (2011). "IFRS and the Regulatory Environment: The Case of U.S. Investor Allocation Choice," *Journal of Accounting and Public Policy* 30, 481–500.
- Shleifer, A., and R. Vishny (1997). "A Survey of Corporate Governance," *The Journal of Finance* 52(2), 737–783.
- Smith, C., Jr., and J. B. Warner (1979). "On Financial Contracting: An Analysis of Bond Covenants," *Journal of Financial Economics* 7, 117–161.
- Venkataraman, S. (1997). "The distinctive domain of entrepreneurship research: An editor's perspective," in *Advances in Entrepreneurship, Firm Emergence, and Growth*, Vol. 3. Eds. J. Katz and R. Brockhaus. Greenwich, CT: JAI Press, 119–138.
- Verecchia, R. E. (1983). "Discretionary Disclosure," *Journal of Accounting and Economics* 5, 179–194.
- Wang, D. (2006). "Founding Family Ownership and Earnings Quality," *Journal of Accounting Research* 44, 619–656.

- Wu, Z., and J. H. Chua (2012). "Second-Order Gender Effects: The Case of U.S. Small Business Borrowing Cost," *Entrepreneurship Theory and Practice* 36(3), 443–463.
- Wu, Z., J. H. Chua, and J. J. Chrisman (2007). "Effects of Family Ownership and Management on Small Business Equity Financing," *Journal of Business Venturing* 22, 875–895.
- Wu, Z., P. L. Hedges, and S. Zhang (2007). "Effects of Concentrated Ownership and Owner-Management on Small Business Debt Financing," *Journal of Small Business Management* 45(4), 422–437.
- Yu, G. (2010). "Accounting Standards and International Portfolio Holdings: Analysis of Cross-Border Holdings Following Mandatory Adoption," Ph.D. Dissertation, University of Michigan.
- Zellweger, T. M., and J. H. Astrachan (2008). "On the Emotional Value of Owning a Firm," *Family Business Review* 21, 347–363.
- Zellweger, T. M., F. W. Kellermanns, J. J. Chrisman, and J. H. Chua (2012). "Family Control and Family Firm Valuation by Family CEOs: The Importance of Intentions for Transgenerational Control," *Organization Science* 23(3), 851–868.

Entrepreneurship and Family Firm Research: A Bibliometric Analysis of An Emerging Field*

by M^a Concepción López-Fernández, Ana M^a Serrano-Bedia,
and Marta Pérez-Pérez

This work carries out a comprehensive and systematic review of academic research on entrepreneurship in family firms applying bibliometric indicators. We review the literature published on these topics on the database ISI Web of Knowledge's Social Sciences Citation Index. The results provided show that it is a relatively recent field of study, highly interconnected with high co-citation between authors, which verifies compliance with Lotka's Law, and where the most productive authors and journals do not necessarily coincide with those most cited. Finally, the co-word analysis has identified research topics classified into widely developed issues and specialized peripheral issues.

Introduction

There is general agreement among scholars about the relevance of both the entrepreneurship and the family firm fields, and several claim that family is “the oxygen that feeds the fire of entrepreneurship” (Rogoff and Heck 2003). To date, however, there remains much to know about the kind of relationship between the two fields. Thus, some authors argue that there is an overlap between the entrepreneurship and family firm domains (Debicki et al. 2009), an argument confirmed in terms of what are the most relevant journals in both fields (Benavides-Velasco, Quintana-García, and Guzmán-Parra 2013; Chrisman et al. 2010; Debicki et al. 2009; Shane 1997; Teixeira 2011). Other authors, for their part, claim that they are

related disciplines (Anderson, Jack, and Dodd 2005) that have to a great extent been developed independently (Nordqvist and Melin 2010). And finally, a third group sees the growing family firm literature as the emergence of a specialty in the entrepreneurship field (Teixeira 2011).

A detailed and in-depth analysis of objective reviews conducted in both literatures could help to bring to light a more accurate perception of reality. On the one hand, the bibliometric analyses of entrepreneurship literature show that the family firm is practically absent as a research area of interest among entrepreneurship scholars (Cornelius, Landström, and Persson 2006; Grégoire et al. 2006; Reader and Watkins 2006; Schildt, Zahra, and Sillanpää 2006). On the other hand, the bibliometric analyses conducted in the

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family firm literature confirm this vision to the extent that they estimate in about 5 percent the studies on the field researching the issues of entrepreneurship and innovation (Benavides-Velasco, Quintana-García, and Guzmán-Parra 2013; Chrisman, Chua, and Sharma 2003; Debicki et al. 2009; Yu et al. 2012).

Despite the fact that the fields of entrepreneurship and family business have mainly been developed independently, it has recently been observed an increased scholarly interest in studies that integrate both research areas. The consolidation of a corporate entrepreneurship cluster, as evidenced by the bibliometric studies on entrepreneurship (Cornelius, Landström, and Persson 2006), points out in this line to highlight the need for further analysis of the phenomenon of entrepreneurship in the field of business in general and, by extension, of the family business. An additional indicator of such interest is the increasing number of papers and even special issues (e.g., *Entrepreneurship and Regional Development*, 2010; *Journal of Small Business Management*, 2008, or *Strategic Entrepreneurship Journal*, 2011) about this topic in the last years.

Nonetheless, to date, there is no systematic literature review about the intersection of both fields. The only review, to date, of the overlapping area was conducted by Nordqvist and Melin (2010) for their introductory article to the special issue of *Entrepreneurship and Regional Development*. They summarized 38 works subjectively selected and written from 1998 to 2008. This paper seeks to broaden and extend this line of work in several directions. First, the main objective of this work is to carry out a comprehensive, systematic, and objective review of academic research on entrepreneurship in family firms applying bibliometric indicators, a type of review that has not been carried out to date. With this purpose, we reviewed the literature published on these topics on the database ISI Web of Knowledge's Social Sciences Citation Index (SSCI). This review will allow us to have a more realistic view about the development and size of the field; to describe the evolution of publication activity as well as the most representative authors and journals; to synthesize and organize existing knowledge through the identification of research clusters; and to identify potential avenues for future research.

Second, the existing bibliometric studies both in the field of entrepreneurship (Cornelius,

Landström, and Persson 2006; Grégoire et al. 2006; Reader and Watkins 2006; Schildt, Zahra, and Sillanpää 2006) and family business (Casillas and Acedo 2007; Debicki et al. 2009) have mainly used bibliometric indicators that provide data on the volume and impact of research activities and productivity of authors and co-citation analysis to trace the connections between researchers and fields. This article incorporates, in addition to the above, a type of indicator that has only recently been used in some previous work in the field of family business (Benavides-Velasco, Guzmán-Parra, and Quintana-García 2011; Benavides-Velasco, Quintana-García, and Guzmán-Parra 2013), namely co-words analysis and construction of diagrams or clusters therefrom. This latter type of indicators are of particular interest to the researchers, because by focusing on content analysis of the articles to define and classify research subjects allow an overview of the scientific field decreasing the degree of subjective component accompanying traditional literature review processes. The rest of the article is organized as follows: in the next section, we describe the methodology for the systematic review and bibliometric analysis. The results of the process are explained in the third section, and finally, we present the main conclusions that can be drawn from our research.

Methodology

This section first describes the methodology carried out in a first stage of systematic review of the scientific literature. Then, we briefly present the type of indicators used in the second stage of bibliometric analysis.

Methodology Used in the Systematic Review Process

For the development of the research, we carried out a previous systematic search accessing the database ISI Web of Knowledge's SSCI during the month of July 2012 with the criteria detailed further. Although the selected time limit was the maximum allowed in order not to distort the results, it was found that the first article has been published in 1992. Furthermore, we did not include 2012 in our time limit because the complete results for that year will not be available until mid-2013. The use of the whole SSCI database avoids a potential bias and/or omission in the final set of the selected articles if we have considered only a set of relevant journals. Moreover, as both entrepre-

Table 1
Systematic Review of Search
Conditions Process

Keywords	("family business*" or "family firm*" or "family own*" or "family control*") AND ("entrepreneur*" or "venture*")
Type of Document	"article" AND "review" (but not "book review")
Language	"English"
Subject Area	Social Sciences

Source: Authors.

neurship and family firm are multidisciplinary fields (Benavides-Velasco, Quintana-García, and Guzmán-Parra 2013; Cornelius, Landström, and Persson 2006), the use of the SSCI database allows us to consider all the possible works published in a wide range of journals.

The search for data in SSCI was conducted with the conditions shown in Table 1, where the keywords were used as selection criteria for the *topic* or *subject* (title, keywords, or abstract). To ensure the comprehensive nature of our search, we have primarily included as keywords those that are generic to family firm—"Family Business*" and "Family Firm*" (Benavides-Velasco, Quintana-García, and Guzmán-Parra 2013). When defining the concept of family firm, it is important to differentiate between family and business. According to Nordqvist and Melin (2010), the enterprising family means the "family as an institution or social structure, which can both help and hinder business activity" (Nordqvist and Melin 2010), whereas the family firm is "a type of organization or organizational context, with certain characteristics that may facilitate or constrain business activities, processes and outcomes" (Nordqvist and Melin 2010). In our work, we have chosen to incorporate only the second dimension, which is the family firm, as the unit of analysis. The search also includes as keywords those referring to the family nature of the company ownership or management—"Family Owned*" and "Family controlled*"—according to the key features used by authors such as Shanker and Astrachan (1996) to propose the existence of a rising

continuum to define the degree of nonfamily firm–family firm.

Second, we have included both the generic term "Entrepreneur*" (Cornelius, Landström, and Persson 2006; Reader and Watkins 2006; Schildt, Zahra, and Sillanpää 2006) as well as "Ventur*" (Cornelius and Persson 2006; Cornelius, Landström, and Persson 2006), in order to incorporate in the analysis both dimensions of entrepreneurship as a process (Sharma and Chrisman 1999), that is not only the activity undertaken by the entrepreneur to start a new business—*independent entrepreneurship*—but also the activities carried out within a company—*corporate entrepreneurship* and *venture capital*.

With regard to the publication language in JCR magazines published in *Social Sciences* categories, a research study revealed that 95.06 percent of the journals were published in English, so it was chosen as the search language. With regard to the type of document, the decision was made to select the articles and reviews published in journals as the basis for analysis as both are the source of most up-to-date knowledge.

With these search criteria, we obtained an initial sample of 241 documents. With regard to this figure, it is clear that the literature review studies in the independent field of family business have identified about 700 articles (Benavides-Velasco, Guzmán-Parra, and Quintana-García 2011; Benavides-Velasco, Quintana-García, and Guzmán-Parra 2013); and a search on ISI with the terms of entrepreneurship and venturing taken together clearly shows a number higher than 2,000 articles, so it seems understandable that the intersection of both fields contain a smaller number of articles. Moreover, there are bibliometric studies with similar samples (Chao, Yang, and Jen 2007; Rojas, Real, and García-Silberman 2011; Vossen, Hage, and Karim 2000; Wallin 2012) or even lower (Pinheiro, Joao, Menagon, Nilton, and de Carvalho 2012; Sifrim, Barker, and Mate 2012; Wan, Anuar, and Zainab 2009) confirming that the sample size is suitable for the development of this type of methodology.

Given the multidisciplinary nature of both entrepreneurship and family firm fields, various authors may use those concepts (specifically entrepreneurship) differently (Cornelius, Landström, and Persson 2006). Moreover, we found documents that did not jointly analyze a

problem linked to entrepreneurship in the family firm. To avoid these problems, a filtering process consisting in independent reading of abstracts by two of the authors of this work was carried out reducing the sample to 129 articles (see the Supporting information). Once the final sample had been obtained, a second phase was the creation of a Microsoft Access database that was adjusted to perform the analysis without distorting the results. In a more precise way, adjustments of the errors during data download were made, verifying that references to the same author were carried out in the same manner or homogenizing the *keywords* from the text in plural and singular terms.

Methodology Used in the Bibliometric Analysis

With regard to the process of bibliometric analysis, we start by pointing out that bibliometrics is defined as a part of scientometrics that applies mathematical and statistical methods in order to study and analyze the scientific activity in a field of research (Callon, Courtial, and Penan 1995). Particularly, we used diverse types of indicators, which can be classified into two categories:

- (1)—*Activity indicators*, which provide data about the volume and impact of research, allowing one to observe the quantitative evolution of the literature. In this particular case, we analyzed the productivity of authors and journals, the evolution of the field of study, and compliance with Lotka's Law (Lotka 1926).
- (2)—*First and second generation relation indicators*. Particularly we used Author Co-citation Analysis (ACA) and Co-words analysis. ACA allows us to trace the connections between researchers and fields emphasizing the idea that joint references contained by scientific articles let us identify the seminal documents, as well as the ones that contribute to develop the field. Co-words technique is based on the analysis of the co-occurrences of keywords, which allows the depiction of the state-of-the-art research, identifying and classifying clusters or research topics in a

strategic matrix associated according to their levels of development.

With regard to the tools used for the calculation of these indicators, for activity indicators and first-generation relation, we used the software program SITKIS (a free bibliometrics tool) along with UCINET and NETDRAW, whereas for the analysis of second-generation indicators (co-words analysis), the free bibliometrics software REDES 2005 was used.

Results

Once the methodology has been presented as well as the main features of bibliometric indicators, in this section, we first present the main results of the application of the activity indicators. Second, we discuss the results obtained from the relationship indicators.

Results of the Activity Indicators

The main results obtained in relation to the application of activity indicators are summarized in Table 2.

Regarding the first indicator, evolution of the field of study, the analysis shows a relatively recent field, as the first documents date from the early 1990s. Its evolution has confirmed the existence of two research cycles (see Figure 1). The first period covers the first decade (1992–2002), and in it the scientific production is both limited (always below the five articles per year mark) and irregular (with several years with no or very low production). The second period is marked by a surge in research starting in 2003, the year from which the trend has grown steadily, except for a sharp decline in 2008, with full recovery from 2009. It should be noted that the two research periods identified coincide with the start date and the consolidation of the corporate entrepreneurship cluster (Cornelius, Landström, and Persson 2006; Grégoire, Noël, Déry, and Bécharde 2006).

The analysis of Lotka's Law¹ allows to conclude whether the analyzed field is one in which most of the production is concentrated in a limited number of authors or not. In this case, the result 2,691 shows that, compared with other disciplines (such as the field of data mining with a value of 3,629 (Tsai 2012), there is a greater concentration of articles in few

¹Lotka's Law is formulated as $Y = K/X^n$ where K and n are constants, usually $n = 2$, Y is the number of authors publishing n papers and X the number of authors publishing one paper in an area of research over a period (Chung and Cox 1990).

Table 2
Activity Indicators

Evolution of the field of study		2 research periods are identified (Figure 2):											
		First period: 1992–2002	Second period: 2003–present										
Lotka's Law		<i>n</i> = 2.691											
Productivity of authors and most cited authors													
Ranking of the most productive authors (number of articles per author													
First period 1992–2002		Second period 2003–2011											
Barkhatova N	1	Mulholland K	1	Chirico F	5	Barnett Tim	2	Hoy F	2	Sharma P	2	Dyer WG	67.00
Buck D	1	Paladino M	1	Wright M	5	Casillas JC	2	Le-Breton Miller, I	2	Sieger P	2	Habbershon G	57.00
Chung CN	1	Robbie K	1	Danes SM.	4	Chang S	2	Mazzola P	2	Singh G	2	Astrachan J	45.00
Dhaliwal S	1	Romano Ca	1	Nordqvist M	4	Chrisman JJ	2	Miller D	2	Simon David G	2	Zahra SA	38.33
Espinal R	1	Scranton P	1	Steier L	4	Chua J H.	2	Moreno A M	2	Sorenson R	2	Miller D	36.5
French M	1	Simmons C	1	Zahra SA	4	DeNoble A	2	Ozsoy O	2	Wiklund J	2	Chrisman JJ	34.0
Grasmuck S	1	Smyrnios KX	1	Perez PF	4	Eddleston KA	2	Pearson AW	2	Yan J	2	Sharma P	30.00
Johansson A	1	Tanewski GA	1	Kellermanns F	3	Ehrlich S	2	Puig N	2	Zellweger T	2	Chua JH	20.00
Kalantaridis C	1	Thompson S	1	Lumpkin G T	3	Fairlie RW.	2	Robb AM	2	Werbel J	2	Simon DG	18.00
Mcnylor P	1	Wright M	1	Salvato C	3	Gevrek D	2	Scholes ML	2	Carney M	2	Morris MH	18.00
Mellor R	1			Westhead P	3	Heck RKZ	2	Sciascia S	2		2		15.0

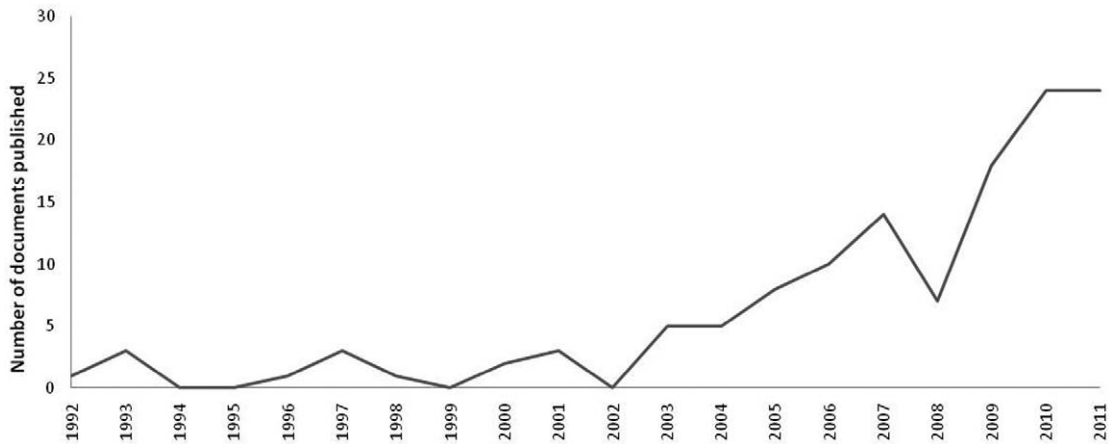
Table 2
Continued

Most productive journals in the area and most cited journals				
Ranking of the most productive journals (number of articles per journal)		Ranking of journals most cited (average of references per journal)		
First period 1992–2002	Second period 2003–2011			
<i>Business History</i>	2 <i>Family Business Review</i>	24 <i>Journal of Management & Organization</i>	2 <i>Organization Science</i>	79.00
<i>Journal of Business Venturing</i>	2 <i>Entrepreneurship Theory and Practice</i>	20 <i>Journal of Management Studies</i>	2 <i>Journal of Business Venturing</i>	52.57
British Journal of Sociology	1 <i>Entrepreneurial and regional Development</i>	6	<i>American Economic Review</i>	39.0
Business History Review	1 <i>International Small Business Journal</i>	5	<i>Family Business Review</i>	29.38
Environment and Planning	1 <i>Journal of Business Venturing</i>	5	<i>Journal of Management Studies</i>	27.00
<i>Journal of Business Research</i>	1 <i>Small Business Economics</i>	5	<i>Entrepreneurship Theory and Practice</i>	26.50
<i>Journal of Comparative Family Studies</i>	1 <i>Strategic Entrepreneurship Journal</i>	5	<i>Journal of Organizational Behavior</i>	26.0
<i>Journal of Management Studies</i>	1 <i>Journal of Small Business Management</i>	4	<i>Journal of Small Business Management</i>	24.0
<i>Journal of Rural Studies</i>	1 <i>African Journal of Business Management</i>	3	<i>Business Ethics—A European Review</i>	20.0
<i>Womens Studies International Forum</i>	1 <i>Business History</i>	3	<i>Journal of Labor Economics</i>	12.00
<i>Work Employment and Society</i>	1 <i>Journal of Business Research</i>	3	<i>Small Business Economics</i>	10.4
	<i>Corporate Governance—An International Review</i>	2	<i>Asia-Pacific Journal of Financial Studies</i>	10.0

Source: Authors.

Note: For second period, we only represent authors and journals that have published more than one paper.

Figure 1
Evolution of Scientific Research in the Field of Entrepreneurship and the Family Firm



Source: Authors

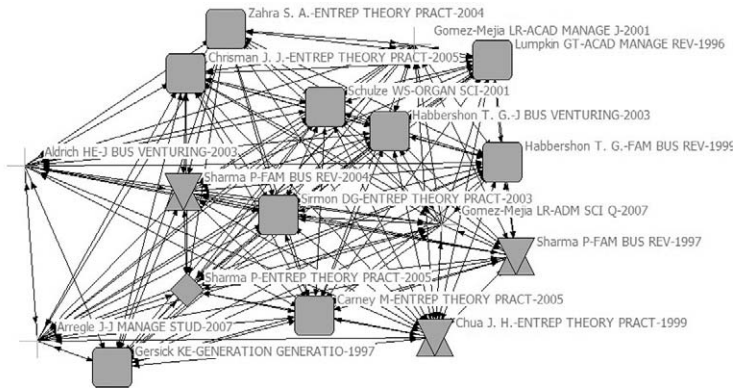
productive authors and most of scholars; therefore, there are not transients in the field because they have made one contribution. In compliance with this law, similar results were obtained as well by other authors, such as Benavides-Velasco, Guzmán-Parra, and Quintana-García (2011), who verified this indicator in their family firm literature review where the n value reached 2.68. According to the results, a total of 299 different authors have written 129 articles, of which 216 have posted only a single article (72.24 percent of the total).

The analysis was also carried out on the productivity of authors and journals and its comparison with the average of references within the sample. This comparison shows that not always the most productive authors/journals coincide with the most cited as it can be seen in Table 2. This conclusion could be biased by the fact that articles published earlier are likely to have received many more citations than recently published papers. As a consequence, this ranking is more likely to include well-established scholars that began publishing some time ago. Thus, first, with respect to the productivity of the authors, it was found that a total of 299 authors have written the 129 documents (2.31 authors per article) receiving 7,130 citations (55.27 citations per paper). Second, with

respect to the productivity of the journals, it was found that the final sample used in this analysis has been published by 46 different journals. In total, these articles have been cited in 2,268 journals, which is equivalent to an average of 17.58 citations to different journals per article.

Also, if we analyze the productivity of authors and journals considering the two research periods found in this field of study (1992–2002 and 2003–2011), we can highlight two aspects (see bold names on Table 2): (1) with respect to the productivity of the authors, it is noted that during the first period, no author published more than one document except for Wright, and none of them continued to publish in this field during the second period. Among the most productive authors, some seem to have specialized in this jointly field, such as Chirico, Danes, Nordqvist, or Zahra, along with others that seem to come from a more general field of entrepreneurship, like Wright, or the family business as Steier, among others; and (2) with respect to the productivity of the journals, analysis shows that only four of the 12 journals containing publications in the first period are among the ranking of the most productive journals of the second period (*Business History*, *Journal of Business Venturing*, *Journal of Business*

Figure 2
Network of Author Co-Citation



Source: Authors

Research, and *Journal of Management Studies*). The rest of the journals in which research has mostly coalesced (*Family Business Review*, *Entrepreneurship Theory and Practice*, *Entrepreneurial and Regional Development*, *International Small Business Journal*, *Journal of Business Venturing*, *Small Business Economics*, *Strategic Entrepreneurship Journal*, or *Journal of Small Business Management*) emerged in the second period. It further notes that the latter journals mentioned are precisely those with greater expertise around both fields, which could indicate the consolidation of interest in this topic within the scholars of both fields.

Results of the Relation Indicators

Network of Co-Citation between Authors. ACA allows us to trace the connections between researchers and fields, emphasizing the idea that joint references contained by scientific articles let us identify the seminal documents as well as the ones that contribute to develop the field. According to Sanz (2003), in order to measure the structure, organization, and level of integration of the joint reference network, one must consider two aspects: the first is the density of the graph, being a measurement expressed as a percentage of the ratio between the number of existing relationships with the maximum number of relationships that could exist if all nodes were connected directly with all others. The second aspect refers to the

centrality—defined through the range—which is based on the percentage of connections that a node has on the entire network (Freeman 1979).

Regarding the first aspect, the density of the graph, the same is made up of 270 relationships from the 272 maximum. In this sense, its 99.26 percent density reveals high connectivity among authors.

Regarding the second aspect, the centrality measure (Figure 2), one can appreciate the existence of several articles that allow greater access to information, identifying those best connected in the network. In this particular case, we can highlight the article by Sirmon DG (*Entrepreneurship Theory and Practice* 2003) followed by others such as Schulze WS (*Organization Science* 2001), or Gersick KE (*Generation to Generation* 1997). All of them are outsiders or, in other words, researchers whose work is cited by family-entrepreneurship researchers but are not part of the academic publishing group in the field. It is important to highlight that of the 17 researchers shown on Figure 2, 37.5 percent are outsiders, and the others could be regarded as insiders indicating family-entrepreneurship researchers citing other family-entrepreneurship scholars.

Co-Words Analysis. The co-words analysis is based on a simple principle: a research specialty can be identified by the particular asso-

ciations established between its keywords (Callon, Courtial, and Penan 1995). Though the analysis of citations, and especially the ACA, involves an intrinsic delay, the co-words analysis does not suffer from this limitation; therefore, it does not hamper more recent works. To perform such a task in a consistent and homogeneous mode, we created a list of keywords using terms that appeared in other articles and established new ones based on the articles' content (Benavides-Velasco, Guzmán-Parra, and Quintana-García 2011; Benavides-Velasco, Quintana-García, and Guzmán-Parra 2013). In the cases of the articles that did not contain keywords, we assigned them based on the titles, abstract, and the full text of the documents. When adding up all joint appearances and representing their relationships graphically, it is possible to identify various thematic groups or *clusters*. In these cases, the strength of the union of the words that comprise them is measured by a normalized index, whose value depends on both the appearance of the words individually as well as their joint appearances.

This is calculated as:

$$e_{ij} = \frac{c_{ij}^2}{c_i c_j}$$

where C_{ij} measures the strength of association between two words i and j , and C_i and C_j are the absolute frequency of occurrence of words i and j respectively.

The co-words analysis made it possible to obtain two types of results: (1) the definition of the themes present in the field and their classification within the strategic matrix in terms of their different levels of development; and (2) networks of keywords associated with each thematic cluster (Table 3).

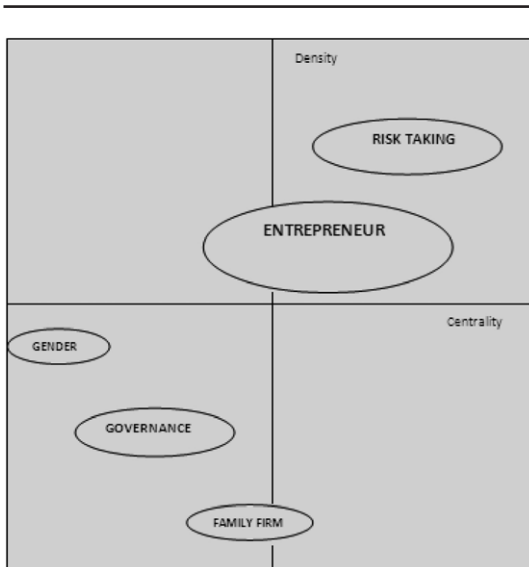
With respect to the first results, the analysis carried out identified a total of five clusters we called Risk Taking, Entrepreneurship, Gender, Family Firm, and Governance as shown in Figure 3. We defined the name of the cluster by the keyword, which is the main node and therefore is better connected with the rest of the cluster keywords.

The results of the strategic matrix correspond to a field whose structure is distributed around the first bisector (quadrant one-quadrant four), indicating that the field is arranged around a core of themes that are well developed and well structured and which are associated with a number of peripheral and underdeveloped themes. Themes were not identified in quadrant two (bottom right) that defines emergent topics that are important for

Table 3
Main Groups of Co-Words Identified Using Hierarchical Clustering Analysis

Clusters	Co-words
Entrepreneurship	Entrepreneurship, network, culture, success, succession, agency cost, venture, embeddedness, firm, business, ownership structure, corporate governance, conceptual issues, consequence, dynamic, exploratory evidence, household, industry, and wealth.
Risk Taking	Risk taking, entrepreneurial orientation, moderating role, environment, linking, firm performance, perspective, orientation, compensation, generational involvement, model, family business, familiness, business performance, strategic management, performance, decision making, corporate entrepreneurship, and management.
Gender	Gender, female, women, leadership, and work.
Governance	Governance, ownership, growth, innovation, family ownership, strategy, opportunity, and agency.
Family Firm	Family firm, financial performance, organizational culture, competitive advantage, and small and medium enterprises.

Figure 3
Strategic Matrix of Themes
Present in the Area of
Entrepreneurship and
Family Firm



Source: Authors

the development of the field, or quadrant three (upper left corner) that identifies peripheral but well developed themes.

Thus, we found a first quadrant (upper right) that defines the widely developed central themes. Within the same, we found the Risk Taking and Entrepreneurship clusters. The fourth quadrant (lower left) defines the peripheral and underdeveloped themes, and here we found the Gender, Governance, and Family Firm clusters.

The analysis of co-words has yielded networks of keywords associated with each of the previously identified clusters in the field (Table 3). These networks of co-words group those keywords that best describe each of the themes present in the field. This information may be of particular interest to help future researchers to define the most important search keywords depending on the specific topic that they seek to address, as they represent the most important words that relate articles to each other and provide more information on the subject.

Thus, we proceed to describe the main lines of research identified in each cluster:

Risk Taking Cluster. The *Risk Taking* cluster is one of two large clusters identified and is defined as one of the dimensions of the Entrepreneurial Orientation (EO) construct. It is also one of the recurring themes in the study of family firms—that relates to risk. The cluster is composed of 34 items (26.4 percent), the vast majority published in the second period identified, which can be said to emerge from 2003 onward. The relevance of the cluster is defined not only by the number of items within it, but also by the significant presence of purely theoretical articles (44.12 percent), reflecting the effort to build and theoretically substantiate lines identified in it. On the other hand, and regarding the methodologies employed in studies that incorporate an empirical part, quantitative studies predominate slightly (52.63 percent) over qualitative studies.

Within the cluster, items can be categorized into five lines. First, there is a small group of general theoretical studies comprising three introductions to different special issues (*Journal of Small Business Management*, 2008; *Entrepreneurship and Regional Development*, 2010; and *Strategic Entrepreneurship Journal*, 2011), and an exploration of possible research areas with more potential for collaboration where entrepreneurship is identified as one of them (Stewart 2008).

The second block of work encompasses articles examining both theoretically and empirically the specific application of EO or some of its dimensions to the case of family businesses, reflecting the effort to incorporate into the field of family firm recent developments in the literature on EO (Chirico et al. 2011; Lumpkin, Brigham, and Moss 2010). To be precise, specific aspects of family firm incorporated are: generational involvement (Casillas, Moreno, and Barbero 2010), family involvement (Casillas and Moreno 2010), and ownership structure (Lim, Lubatkin, and Wiseman 2010). If we focus on the Risk Taking dimension, the results show that family businesses seem to take risks to a lesser extent and with worse outcomes than nonfamily firms (Naldi et al. 2007) and that the long tenure of the founder CEO also decreases their entrepreneurial behavior (Zahra 2005). It is further apparent that the public view is that family firms are less innovative than nonfamily firms (Chang, Wu, and Wong 2010).

The third and relevant body of work examines, both theoretically and empirically, how the particular context of the family business affects entrepreneurial behavior conditions therein. The results suggest that in either a general or particular case (new or corporate venturing, franchises, exit, or divestment), the family business offers a suitable environment to achieve a more effective and less costly use of resources (Ensley and Pearson 2005; Morris et al. 2010; Sharma and Manikutty 2005). A further conclusion drawn is that issues such as the succession process, “familiness” or spousal involvement should be taken into account in studies on innovative capacity and performance of family firms (Habbershon 2006; Mitchell et al. 2009; Van Auken and Werbel 2006).

The analysis of the influence of the organizational culture of family firms in their innovative behavior is the central theme of the fourth line identified (Chirico and Nordqvist 2010; Heck 2004; Zahra, Hayton, and Salvato 2004), which is emerging and poorly developed. It has been shown how certain traits pertinent to the culture of the family business can hinder (paternalism) or favor (orientation toward decentralization and the long term) the innovative behavior of these firms. Nevertheless, more research would be necessary to add knowledge in this area.

The fifth and final line identified is related to the role of identity. This is also very limited in terms of the number of studies and is also keeping a watchful eye on what is a genuine development since it emerged only in 2009 (Reay 2009; Shepherd and Haynie 2009) and lacks continuity. The works identified discuss how the concept of identity helps to deal with conflicts between business and family in the entrepreneurial process.

Entrepreneurship Cluster. This is one of the two major clusters identified and groups 64 articles (49.6 percent). This high number of studies, coupled with their location in the first quadrant of the strategic matrix, indicates that the cluster is organized around a core of well-structured and developed themes. A percentage of 93.6 of the articles in this cluster have been published in the second period identified, with the clear predomination of work of an empirical nature (85.5 percent) compared with theoretical or review. With regard to the methodologies used in empirical studies, quantitative studies are more predominant than

qualitative ones (66 versus 33 percent of the total, respectively). More specifically, one can identify six research lines within the same, which are analyzed further.

The largest group of studies is that dealing with the analysis of the stages of birth, success, and continuity of family businesses. Particular attention is paid to the effects that family, sociocultural, or economic environments may have on the results of these processes. In more precise terms, in this line of research, we find, on the one hand, studies that analyze the influence that family issues, such as Chinese “familism” (Au and Kwan 2009) or the African extended family concept (Khavul, Bruton, and Wood 2009; Robson and Obeng 2008; Smith 2009) may have on the creation and development of businesses in the south and east of Asia and Africa. On the other hand, there are studies focusing on the influence that belonging to a particular ethnic group, usually a minority within a geographical context (Adendorff and Boshoff 2011; Chang, Memili, Chirsman, Kellermanns, and Chua 2009; Fairlie and Robb 2007)—Greeks in South Africa, Koreans and African Americans in the USA—may have on the results of the company. Finally, several works analyze this issue in specific economic contexts, particularly in emerging economies or economically hostile environments (Carney 2007; Dyer and Mortensen 2005). More specifically, the majority of studies in this line have focused on the examination of family firms in the postcommunist transition economies, but other cases such as Turkey, Iran, and Fiji have also been researched.

A second area of interest has been the formation processes of relational capital in family firms and their influence on the creation of collaborative networks and groups of companies, concentrating on their role as a factor of local or national development (Anderson, Jack, and Dodd 2005; Chung 2001; Guo and Miller 2010; Zahra 2010). Again, the analysis of this topic in specific geographical areas, such as China, Taiwan, and Norway, allows for the consideration of social and cultural aspects that are also present in the first line mentioned within this cluster.

The third group of published studies analyzes the influence that the existence of parents with a history of creating self-employment or family business can have on the educational success of their children and their intentions

regarding their professional career upon completion of their studies (Kim 2006; Zellweger, Sieger, and Halter 2011).

A fourth group of very important studies places special interest in analyzing the influence of the role of the founder on various aspects related to strategy, funding opportunities, and business results (Miller, Le Breton-Miller, and Lester 2011; Randoy and Goel 2003). The literature in this case has addressed the analysis not only of the individual founder, but also of other possible types, such as the co-preneurship (Fletcher 2010) or founding teams (Ucbasaran et al. 2003). Along with their role in the creation and development of the company, the literature has also studied the founder of the firm, albeit by another family member or someone outside the organization (Winter et al. 2004). The individual founder is a topic widely discussed in the literature, bearing in mind the implications of this process on the renewal and/or continuity of the firm. In the latter case, analysis has been focused on the factors that determine the success of the succession (Salvato, Chirico, and Sharma 2010; Wasserman 2003), with particular reference to tax issues of the latter (Bjuggren and Sund 2005; Ellul, Pagano, and Panunzi 2010).

In the meantime, a small number of articles analyze the process of recognizing and identifying opportunities for entrepreneurship in the context of the family business, both in a local, national, or international contexts (Patel and Fiet 2011; Zucchella, Palamara, and Denicolai 2007). Finally, there is a group of theoretical studies that focuses on the development of models that allow a better understanding of issues such as interpersonal trust (Sundaramurthy 2008), or the potential advantages of the different types of ownership structure on funding opportunities and agency cost reduction in family firms (Wright et al. 2009; Wu, Chua, and Chrisman 2007).

Gender Cluster. This is one of the three minority clusters identified and groups together eight items (6.2 percent). Their presence indicates that this issue has its own clear definition although due to its size, the issues that have been investigated are limited in number. Seventy-five percent of the studies in this cluster have been published in the second period identified, and regarding to methodologies used, quantitative studies slightly predominate over

qualitative ones. Specifically, the articles can be categorized in three lines.

The most developed is the work that spotlights, in different geographical settings, the analysis of the role of women in family business creation from different points of view. These include: the resistance of patriarchal cultures toward allowing an active position of women (Dhaliwal 1998; Hamilton 2006); the influence of structural social and economic changes over long periods of time (Munoz and Perez 2007); and the differences between men and women in the support given to the spouse entrepreneur (Matzek, Gudmunson, and Danes 2010). The second line identified is the study of the incidence of gender of ownership on a firm's performance, and explanations are proposed for the worst results of women's businesses. The possible explanations are related to both the weaker starting conditions in terms of endowment of resources and capabilities (Fairlie and Robb 2009), as well as the differences in decisions on the allocation of income between business and family use or differences in the support received (Danes, Stafford, and Teik-Cheok Loy 2007; Espinal and Grasmuck 1997). Finally, there is a study that examines the influence of gender on leadership and the role of the CEO, with different patterns identified (Barrett and Moores 2009).

Governance Cluster. The "Governance" cluster brings together 15 articles (11.6 percent). Seventy-three percent of the works were published in the second period identified, and barely 20 percent of the studies are qualitative. The works may be classified into three different but connected lines centering on what bearing family ownership and involvement have on decision-making related to entrepreneurship in family businesses.

The largest group comprises the work that has studied the relationship between the degree of family ownership and involvement, and different strategic decisions related to entrepreneurship, such as strategies to address corporate entrepreneurship (Kellermanns and Eddleston 2006), innovation (Andrade et al. 2011), internationalization (Zahra 2003), or participation in Buy Outs (Scholes, Wright, Westhead, and Bruining 2010; Wright, Thompson, and Robbie 1992) among others.

A second line comprises the work analyzing how the priority to maintain the control of the company, very characteristic of family

businesses, influences their entrepreneurial behavior (Romano, Tanewski, and Smyrniotis 2001). The third line brings together the studies analyzing the figure of the CEO and how the different variables that can be used to characterize them (age, tenure, and generation) may influence different aspects of entrepreneurship in family firm, for instance EO (Miller and Le Breton-Miller 2011), the orientation toward the market (Beck et al. 2011) or entrepreneurial behavior (Kellermanns et al. 2008).

Family Firm Cluster. The cluster comprises eight articles (6.2 percent), indicating that the aspects investigated in the cluster have been limited. All the works in this cluster have been published in the second period identified and, as for the methodologies used in empirical studies and qualitative studies, case analyses are predominant.

Specifically, the studies can be categorized in two main lines. The first investigates the macroeconomic factors weighing on the process of internationalization of family businesses, although the analysis is limited to a very specific geographical context, as is Spain (Puig and Fernandez-Perez 2009). The second line includes issues related to the strategic management of the company from different perspectives. Thus, among the papers identified some focus on the decision-making process leading to the development of family firms in particular economic sectors, such as tourism (Getz and Carlsen 2005). Others study whether the ethnicity of the founding family affects the type of strategy developed by the company (Bhalla et al. 2009), and a further group examines the internal factors that may influence the implementation of the same (Bruque and Moyano 2007). This interest in internal dynamics and their relation to strategy is present in the remainder of the work identified in this line which, starting from the resource-based view (RBV) approach analyzes: (1) the relevant resources for the implementation of enterprise portfolio strategies in family firms (Sieger et al. 2011); and (2) how those resources are combined to furnish dynamic capabilities that allow the company to better adapt to their environment (Chirico and Salvato 2008). However, the total work is still insignificant in numerical terms, limiting itself so far to the analysis of resource knowledge and its integration and transfer within the company.

Conclusions

This article constitutes a first attempt to carry out a comprehensive, systematic, and objective review of academic research on entrepreneurship in family firms applying bibliometric indicators. It uses as a basis the literature published on these topics on the database ISI Web of Knowledge's SSCI. A number of conclusions spring from the analysis.

First, the information provided by the activity indicators confirms that this is a relatively new area of study, as the earliest documents date from the early 1990s, and the area is experiencing an upward trend. We have identified two periods: the first (1992–2002) with low output and a second (2003–present) of clear growth, coinciding with the start of the corporate entrepreneurship cluster in the field of entrepreneurship. The analysis verifies compliance with Lotka's Law, which means that there is a higher concentration of items in few productive authors compared with other disciplines.

The analysis of activity indicators also reveals that the most productive authors and journals do not necessarily coincide with those most cited. Thus, the most productive journals are the *Family Business Review* and *Entrepreneurship Theory and Practice*; both of them clearly focused in these fields, whereas the most prominent in terms of averages of citations are *Organization Science* and *Journal of Business Venturing*. As for the authors, the most striking outcome is the lack of continuity of the same between the two periods identified, exemplified by the fact that only Wright is published in both periods. Among the most productive authors, some seem to have specialized in this joint field, such as Chirico, Danes, Nordqvist or Zahra, along with others that seem to come from a more general field of entrepreneurship, like Wright, or the family business as Steier, among others.

Regarding to the structure, organization, and level of integration of the co-citation network, the most notable result in this sense is the fact that this field is highly interconnected with high co-citation between authors. It is also noteworthy that a high percentage of the articles better connected come from outsiders or, in other words, researchers whose work is cited by family-entrepreneurship researchers but are not part of the academic publishing group in the field.

With regard to the co-words analysis and construction of diagrams or clusters to define and classify research subjects from the same, the analysis indicates that the field is structured around widely developed themes—*Risk Taking* and *Entrepreneurship*—and underdeveloped peripheral themes—*Gender, Governance and Family Firm*—without clusters in either peripheral or emerging quadrants. In this regard, it will be necessary to await future development to see if the *Family Firm* cluster becomes an emerging topic.

With regard to the study of the relationship between entrepreneurship and family firm, content analysis of the different clusters identified reveals that the bulk of the research conducted to date has developed around some very concrete themes: theoretical and empirical incorporation in the field of family firm of the latest developments in the literature on EO; the influence of the family nature of the business on entrepreneurial behavior; the relationship between the degree of ownership and family involvement and strategy, including in this case the analysis of CEO/founder, the influence of the founder's role on aspects of strategy; and the problems of succession and its impact on the renewal or continuity of the business.

Consistent with the above, the analysis has shown that future research on the relationship between entrepreneurship and family business can address issues such as the analysis of: the influence of the organizational culture of family firms in their innovative behavior; social and individual characteristics in the entrepreneurial process; the cultural and socioeconomic environment in the process of creation; the success and continuity of family businesses in contexts not yet analyzed—Latin America, North Africa, Arab countries; the role of family firms in creating collaborative networks and groups of enterprises; the influence of gender on leadership and the role of the CEO; or the internal factors of the family firm, including its resources and capabilities, which can influence the implementation of strategy. These results suggest that there are many opportunities to improve our knowledge available as to the relationship between the family business and entrepreneurship. This is relevant not only from an academic standpoint, but also to help promote entrepreneurial attitudes in subsequent generations of the family business, allowing this group of companies to continue to contribute over time to the maintenance and creation of economic wealth.

References

- Adendorff, C., and C. Boshoff (2011). "The Impact of Culture-Related Factors on Good Governance in Greek Family Businesses in South Africa," *South African Journal of Business Management* 42(2), 1–14.
- Anderson, A. R., S. Jack, and S. Dodd (2005). "The Role of Family Members In Entrepreneurial Networks: Beyond the Boundaries of the Family Firm," *Family Business Review* 18(2), 135–154.
- Andrade, D. M., J. B. de Lima, L. M. Antonialli, and C. D. M. Fernandaes (2011). "The Family Social Capital Impact in Practices of Learning, Change and Innovation in Entrepreneurial Family Businesses," *African Journal of Business Management* 5(33), 12819–12828.
- Au, K., and H.-K. Kwan (2009). "Start-Up Capital and Chinese Entrepreneurs: The Role of Family," *Entrepreneurship Theory and Practice* 33(4), 889–908.
- Barrett, M., and K. Moores (2009). "Spotlights and Shadows: Preliminary Findings about the Experiences of Women in Family Business Leadership Roles," *Journal of Management and Organization* 15(3), 363–377.
- Beck, L., W. Janssens, M. Debruyne, and T. Lommelen (2011). "A Study of the Relationships between Generation, Market Orientation, and Innovation in Family Firms," *Family Business Review* 24(3), 252–272.
- Benavides-Velasco, C. A., V. Guzmán-Parra, and C. Quintana-García (2011). "Evolución De La Literatura Sobre Empresa Familiar Como Disciplina Científica," *Cuadernos de Economía y Dirección de la Empresa* 14(2), 78–90.
- Benavides-Velasco, C. A., C. Quintana-García, and V. Guzmán-Parra (2013). "Trends in Family Business Research," *Small Business Economics* 40(1), 41–57.
- Bhalla, A., J. Lampel, S. Henderson, and D. Watkins (2009). "Exploring Alternative Strategic Management Paradigms in High-Growth Ethnic and Non-Ethnic Family Firms," *Small Business Economics* 32(1), 77–94.
- Bjuggren, P.-O., and L. G. Sund (2005). "Organization of Transfers of Small and Medium-Sized Enterprises within the Family: Tax Law Considerations," *Family Business Review* 18(4), 305–319.
- Bruque, S., and J. Moyano (2007). "Organisational Determinants of Information

- Technology Adoption and Implementation in SMEs: The Case of Family and Cooperative Firms,” *Technovation* 27(5), 241–253.
- Callon, M., J. P. Courtial, and H. Penan (1995). *Cienciometría. La medición de la actividad científica: de la bibliometría a la vigilancia tecnológica.* Gijón; Ediciones Trea.
- Carney, M. (2007). “Minority Family Business in Emerging Markets: Organization Forms and Competitive Advantage,” *Family Business Review* 20(4), 289–300.
- Casillas, J. C., and F. J. Acedo (2007). “Evolution of the Intellectual Structure of Family Business Literature: A Bibliometric Study of FBR,” *Family Business Review* 20(2), 141–162.
- Casillas, J. C., and A. M. Moreno (2010). “The Relationship between Entrepreneurial Orientation and Growth: The Moderating Role of Family Involvement,” *Entrepreneurship and Regional Development* 22(3–4), 265–291.
- Casillas, J. C., A. M. Moreno, and J. Barbero (2010). “A Configurational Approach of the Relationship between Entrepreneurial Orientation and Growth of Family Firms,” *Family Business Review* 23(1), 27–44.
- Chang, E. P. C., E. Memili, J. J. Chrisman, F. W. Kellermans, and J. H. Chua (2009). “Family Social Capital, Venture Preparedness, and Start-Up Decisions a Study of Hispanic Entrepreneurs in New England,” *Family Business Review* 22(3), 279–292.
- Chang, S.-C., W.-Y. Wu, and Y.-J. Wong (2010). “Family Control and Stock Market Reactions to Innovation Announcements,” *British Journal Management* 21(1), 152–170.
- Chao, C.-C., J.-M. Yang, and W.-Y. Jen (2007). “Determining Technology Trends and Forecasts of RFID by a Historical Review and Bibliometric Analysis from 1991 to 2005,” *Technovation* 27(5), 268–279.
- Chirico, F., and M. Nordqvist (2010). “Dynamic Capabilities and Trans-Generational Value Creation in Family Firms: The Role of Organizational Culture,” *International Small Business Journal* 28(5), 487–504.
- Chirico, F., and C. Salvato (2008). “Knowledge Integration and Dynamic Organizational Adaptation in Family Firms,” *Family Business Review* 21(2), 169–181.
- Chirico, F., D. Sirmon, S. Sciascia, and P. Mazzola (2011). “Resource Orchestration in Family Firms: Investigating How Entrepreneurial Orientation, Generational Involvement, and Participative Strategy Affect Performance,” *Strategic Entrepreneurship Journal* 5(4), 307–326.
- Chrisman, J., J. Chua, and P. Sharma (2003). “Current Trends and Future Directions in Family Business Management Studies: Toward a Theory of the Family Firm,” in *Coleman White Paper Series* 4, 1–63.
- Chrisman, J. J., F. W. Kellermans, K. C. Chan, and K. Liano (2010). “Intellectual Foundations of Current Research in Family Business: An Identification and Review of 25 Influential Articles,” *Family Business Review* 23(1), 9–26.
- Chung, C.-N. (2001). “Markets, Culture and Institutions: The Emergence of Large Business Groups in Taiwan, 1950s–1970s,” *Journal of Management Studies* 38(5), 719–745.
- Chung, K. H., and R. A. Cox (1990). “Patterns of Productivity in the Finance Literature: A Study of the Bibliometric Distributions,” *Journal of Finance* 45(1), 301–309.
- Cornelius, B., and O. Persson (2006). “Who’s Who in Venture Capital Research?,” *Technovation* 26(2), 142–150.
- Cornelius, B., H. Landström, and O. Persson (2006). “Entrepreneurial Studies: The Dynamic Research Front of a Developing Social Science,” *Entrepreneurship Theory and Practice* 30(3), 375–397.
- Danes, S. M., K. Stafford, and J. Teik-Cheok Loy (2007). “Family Business Performance: The Effects of Gender and Management,” *Journal of Business Research* 60(10), 1058–1069.
- Debicki, B. J., C. F. Matherne, III, F. W. Kellermans, and J. J. Chrisman (2009). “Family Business Research in the New Millennium: An Overview of the Who, the Where, the What, and the Why,” *Family Business Review* 22(2), 151–166.
- Dhaliwal, S. (1998). “Silent Contributors: Asian Female Entrepreneurs and Women in Business,” *Womens Studies International Forum* 21(5), 463–474.
- Dyer, W. G., and S. P. Mortensen (2005). “Entrepreneurship and Family Business in a Hostile Environment: The Case of Lithuania,” *Family Business Review* 18(3), 247–258.
- Ellul, A., M. Pagano, and F. Panunzi (2010). “Inheritance Law and Investment in Family Firms,” *American Economic Review* 100(5), 2414–2450.
- Ensley, M. D., and A. W. Pearson (2005). “An Exploratory Comparison of the Behavioral Dynamics of Top Management Teams in

- Family and Nonfamily New Ventures: Cohesion, Conflict, Potency, and Consensus," *Entrepreneurship Theory and Practice* 29(3), 267–284.
- Espinal, R., and S. Grasmuck (1997). "Gender, Households and Informal Entrepreneurship in the Dominican Republic," *Journal of Comparative Family Studies* 28(1), 103–128.
- Fairlie, R. W., and A. M. Robb (2007). "Why Are Black-Owned Businesses Less Successful Than White-Owned Businesses? The Role of Families, Inheritances, and Business Human Capital," *Journal of Labor Economics* 25(2), 289–323.
- (2009). "Gender Differences in Business Performance: Evidence from the Characteristics of Business Owners Survey," *Small Business Economics* 33(4), 375–395.
- Fletcher, D. (2010). "Life-Making or Risk Taking? Co-Preneurship and Family Business Start-Ups," *International Small Business* 28(5), 452–469.
- Freeman, L. C. (1979). "Centrality in Social Networks Conceptual Clarification," *Social Networks* 1(3), 215–239.
- Getz, D., and J. Carlsen (2005). "Family Business in Tourism—State of the Art," *Annals of Tourism Research* 32(1), 237–258.
- Grégoire, D. A., M. X. Noël, R. Déry, and J.-P. Bécharde (2006). "Is There Conceptual Convergence in Entrepreneurship Research? A Co-Citation Analysis of Frontiers of Entrepreneurship, 1981–2004," *Entrepreneurship Theory and Practice* 30(3), 333–373.
- Guo, C., and J. K. Miller, (2010). "Guanxi Dynamics and Entrepreneurial Firm Creation and Development in China," *Management and Organizational Review* 6(2), 267–291.
- Habbershon, T. G. (2006). "Commentary: A Framework for Managing the Familiness and Agency Advantages in Family Firms," *Entrepreneurship Theory and Practice* 30(6), 879–886.
- Hamilton, E. (2006). "Whose Story Is It Anyway? Narrative Accounts of the Role of Women in Founding and Establishing Family Businesses," *International Small Business Journal* 24(3), 253–271.
- Heck, R. K. Z. (2004). "A Commentary on 'Entrepreneurship in Family vs. Non-Family Firms: A Resource-Based Analysis of the Effect of Organizational Culture'," *Entrepreneurship theory and practice* 28(4), 383–389.
- Kellermanns, F. W., and K. A. Eddleston (2006). "Corporate Entrepreneurship in Family Firms: A Family Perspective," *Entrepreneurship Theory and Practice* 30(6), 809–830.
- Kellermanns, F. W., K. A. Eddleston, T. Barnett, and A. Pearson (2008). "An Exploratory Study of Family Member Characteristics and Involvement: Effects on Entrepreneurial Behavior in the Family Firm," *Family Business Review* 21(1), 1–14.
- Khavul, S., G. D. Bruton, and E. Wood (2009). "Informal Family Business in Africa," *Entrepreneurship Theory and Practice* 33(6), 1219–1238.
- Kim, D. Y. (2006). "Stepping-Stone to Intergenerational Mobility? The Springboard, Safety Net, or Mobility Trap Functions of Korean Immigrant Entrepreneurship for the Second Generation," *International Migration Review* 40(4), 927–962.
- Lim, E. N. K., M. H. Lubatkin, and R. M. Wiseman (2010). "A Family Firm Variant of the Behavioral Agency Theory," *Strategic Entrepreneurship Journal* 4(3), 197–211.
- Lotka, A. J. (1926). "The Frequency Distribution of Scientific Productivity," *Journal of Washington Academy Sciences* 16(12), 317–323.
- Lumpkin, G. T., K. Brigham, and T. W. Moss (2010). "Long-Term Orientation: Implications for the Entrepreneurial Orientation and Performance of Family Businesses," *Entrepreneurship and Regional Development* 22(3–4), 241–264.
- Matzek, A. E., C. G. Gudmunson, and S. M. Danes (2010). "Spousal Capital as a Resource for Couples Starting a Business," *Family Relations* 59(1), 60–73.
- Miller, D., and I. Le Breton-Miller (2011). "Governance, Social Identity, and Entrepreneurial Orientation in Closely Held Public Companies," *Entrepreneurship Theory and Practice* 35(5), 1051–1076.
- Mitchell, J. R., T. A. Hart, S. Valcea, and D. M. Townsend (2009). "Becoming the Boss: Discretion and Postsuccession Success in Family Firms," *Entrepreneurship Theory and Practice* 33(6), 1201–1218.
- Morris, M. H., J. A. Allen, D. F. Kuratko, and D. Brannon (2010). "Experiencing Family Business Creation: Differences between Founders, Nonfamily Managers, and Founders of Nonfamily Firms," *Entrepreneurship theory and practice* 34(6), 1057–1084.
- Munoz, L., and P. F. Perez (2007). "Female Entrepreneurship in Spain during the Nineteenth and Twentieth Centuries," *Business History Review* 81(3), 495–515.

- Naldi, L., M. Nordqvist, K. Sjöberg, and J. Wiklund (2007). "Entrepreneurial Orientation, Risk Taking, and Performance in Family Firms," *Family Business Review* 20(1), 33–47.
- Nordqvist, M., and L. Melin (2010). "Entrepreneurial Families and Family Firms," *Entrepreneurship and Regional Development* 22(3/4), 211–239.
- Patel, P. C., and J. O. Fiet, (2011). "Knowledge Combination and the Potential Advantages of Family Firms in Searching for Opportunities," *Entrepreneurship Theory and Practice* 35(6), 1179–1197.
- Pinheiro Silva, J. A., N. L. Menegon, and M. M. de Carvalho (2012). "Human Reliability and Ergonomics: A Literature Review from 1963 to 2011," *Work a Journal of Prevention assessment and Rehabilitation* 41(1), 3252–3259.
- Puig, N., and P. Fernandez-Perez (2009). "A Silent Revolution: The Internationalisation of Large Spanish Family Firms," *Business History* 51(3), 462–483.
- Randoy, T., and S. Goel (2003). "Ownership Structure, Founder Leadership, and Performance in Norwegian SMEs: Implications for Financing Entrepreneurial Opportunities," *Journal of Business Venturing* 18(5), 619–637.
- Reader, D., and D. Watkins (2006). "The Social and Collaborative Nature of Entrepreneurship Scholarship: A Co-Citation and Perceptual Analysis," *Entrepreneurship Theory and Practice* 30(3), 417–441.
- Reay, T. (2009). "Family-Business Meta-Identity, Institutional Pressures, and Ability to Respond to Entrepreneurial Opportunities," *Entrepreneurship Theory and Practice* 33(6), 1265–1270.
- Robson, P. J. A., and B. Obeng (2008). "The Barriers to Growth in Ghana," *Small Business Economics* 30(4), 385–403.
- Rogoff, E. G., and R. K. Z. Heck (2003). "Evolving Research in Entrepreneurship and Family Business: Recognizing Family as the Oxygen that Feeds the Fire of Entrepreneurship," *Journal of Business Venturing* 18(5), 559–566.
- Rojas, E., T. Real, and S. Garcia-Silberman (2011). "A Systematic Review of Addiction Treatment in Mexico," *Salud Mental* 34(4), 351–365.
- Romano, C. A., G. A. Tanewski, and K. X. Smyrniotis (2001). "Capital Structure Decision Making: A Model for Family Business," *Journal of Business Venturing* 16(3), 285–310.
- Salvato, C., F. Chirico, and P. Sharma (2010). "A Farewell to the Business: Championing Exit and Continuity in Entrepreneurial Family Firms," *Entrepreneurship Theory and Practice* 22(3–4), 321–348.
- Sanz, M. L. (2003). "Análisis de Redes Sociales: O Como Representar Las Estructuras Sociales Subyacentes," *Apuntes de Ciencia y Tecnología* 7, 21–29.
- Schildt, H. A., S. A. Zahra, and A. Sillanpää (2006). "Scholarly Communities in Entrepreneurship Research: A Co-Citation Analysis," *Entrepreneurship Theory and Practice* 30(3), 399–415.
- Scholes, L., M. Wright, P. Westhead, and H. Bruining (2010). "Strategic Changes in Family Firms Post Management Buyout: Ownership and Governance Issues," *International Small Business Journal* 28(5), 505–521.
- Shane, S. A. (1997). "Who Is Publishing the Entrepreneurship Research?," *Journal of Management* 23(1), 83–95.
- Shanker, M. C., and J. H. Astrachan (1996). "Myths and Realities: Family Business's Contribution to the US Economy: A Framework for Assessing Family Business Statistics," *Family Business Review* 9(2), 107–123.
- Sharma, P., and J. J. Chrisman (1999). "Toward a Reconciliation of the Definitional Issues in the Field of Corporate Entrepreneurship," *Entrepreneurship Theory and Practice* 23(3), 11–27.
- Sharma, P., and S. Manikutty (2005). "Strategic Divestments in Family Firms: Role of Family Structure and Community Culture," *Entrepreneurship theory and practice* 29(3), 293–311.
- Shepherd, D., and J. M. Haynie (2009). "Family Business, Identity Conflict, and an Expedited Entrepreneurial Process: A Process of Resolving Identity Conflict," *Entrepreneurship Theory and Practice* 33(6), 1245–1264.
- Sieger, P., T. Zellweger, R. S. Nason, and E. Clinton (2011). "Portfolio Entrepreneurship in Family Firms: A Resource-Based Perspective," *Strategic Entrepreneurship Journal* 5(4), 327–351.
- Sifrim, Z. K., P. Barker and, K. S. Mate (2012). "What Gets Published: The Characteristics of Quality Improvement Research Articles from Low- and Middle-Income Countries," *British*

- Management Journal Quality and Safety* 21(5), 423–431.
- Smith, G. D. (2009). “East Africa: Extended Families with Many Rights,” *Entrepreneurship Theory and Practice* 33(6), 1239–1244.
- Stewart, A. (2008). “Who Could Best Complement a Team of Family Business Researchers-Scholars Down the Hall or in Another Building?,” *Family Business Review* 21(2), 279–293.
- Sundaramurthy, C. (2008). “Sustaining Trust within Family Businesses,” *Family Business Review* 21(1), 89–102.
- Teixeira, A. (2011). “Mapping the (In)visible Collage(s) in the Field of Entrepreneurship,” *Scientometrics* 89, 1–36.
- Tsai, H.-H. (2012). “Global Data Mining: An Empirical Study of Current Trends, Future Forecasts and Technology Diffusions,” *Expert systems with applications* 39(9), 8172–8181.
- Ucbasaran, D., A. Lockett, M. Wright, and P. Westhead (2003). “Entrepreneurial Founder Teams: Factors Associated with Member Entry and Exit,” *Entrepreneurship Theory and Practice* 28(2), 107–127.
- Van Auken, H., and J. Werbel (2006). “Family Dynamic and Family Business Financial Performance: Spousal Commitment,” *Family Business Review* 19(1), 49–63.
- Vossen, M. J., J. Hage, and R. B. Karim (2000). “Formulation of Trichloroacetic Acid Peeling Solution: A Bibliometric Analysis,” *Plastic and Reconstructive Surgery* 105(3), 1088–1094.
- Wallin, M. W. (2012). “The Bibliometric Structure of Spin-Off Literature,” *Innovation-Management Policy and Practice* 14(2), 162–177.
- Wan, K., A. U. Anuar, and A. Zainab (2009). “Bibliometric Studies on Single Journals: A Review,” *Malaysian Journal of Library and Information Science* 14(1), 17–55.
- Wasserman, N. (2003). “Founder-CEO Succession and the Paradox of Entrepreneurial Success,” *Organization Science* 14(2), 149–172.
- Winter, M., S. M. Danes, S.-K. Koh, K. Fredericks, and J. J. Paul (2004). “Tracking Family Businesses and Their Owners Over Time: Panel Attrition, Manager Departure and Business Demise,” *Journal of Business Venturing* 19(4), 535–559.
- Wright, M., S. Thompson, and K. Robbie (1992). “Venture Capital and Management-Led, Leverage Buy-Outs—A European Perspective,” *Journal of Business Venturing* 7(1), 47–71.
- Wright, M., K. Amess, C. Weir, and S. Girma (2009). “Private Equity and Corporate Governance: Retrospect and Prospect,” *Corporate Governance and International Review* 17(3), 353–375.
- Wu, Z., J. H. Chua, and J. J. Chrisman (2007). “Effects of Family Ownership and Management on Small Business Equity Financing,” *Journal of Business Venturing* 22(6), 875–895.
- Yu, A., G. T. Lumpkin, R. Sorenson, and K. H. Brigham (2012). “The Landscape of Family Business Outcomes: A Summary and Numerical Taxonomy of Dependent Variables,” *Family Business Review* 25(1), 33–57.
- Zahra, S. A. (2003). “International Expansion of US Manufacturing Family Businesses: The Effect of Ownership and Involvement,” *Journal of Business Venturing* 18(4), 495–512.
- (2005). “Entrepreneurial Risk Taking in Family Firms,” *Family Business Review* 18(1), 23–40.
- (2010). “Harvesting Family Firms’ Organizational Social Capital: A Relational Perspective,” *Journal of Management Studies* 47(2), 345–366.
- Zahra, S. A., J. C. Hayton, and C. Salvato (2004). “Entrepreneurship in Family vs. Non-Family Firms: A Resource-Based Analysis of the Effect of Organizational Culture,” *Entrepreneurship theory and practice* 28(4), 363–381.
- Zellweger, T., P. Sieger, and F. Halter (2011). “Should I Stay or Should I Go? Career Choice Intentions of Students with Family Business Background,” *Journal of Business Venturing* 26(5), 521–536.
- Zucchella, A., A. G. Palamara, and S. Denicolai (2007). “The Drivers of the Early Internationalization of the Firm,” *Journal of World Business* 42(3), 268–280.

Supporting Information

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Family Business Characteristics and the Approach to HRM in Overseas Ventures

by Mariasole Bannò and Francesca Sgobbi

This paper provides new evidence on the relationship between family business (FB) and human resource management (HRM) abroad. Our analysis provides two main results. First, not all organizational attributes of FBs exert the same effect on the approach to HRM abroad. Whereas participation of family members in the board of directors displays no significant impact, ownership and family managerial models favor the exploitation of the human resources supplied by the parent company. In contrast, the involvement of young successors favors an explorative attitude. Second, a multidimensional approach has better explanatory power compared with a dichotomous classification of FBs.

Introduction

Internationalization provides firms with new opportunities to grow and develop the competences required to survive in increasingly competitive markets. Not surprisingly, internationalization processes have been involving a growing number of family businesses (FBs) (Kontinen and Ojala 2010; Patel, Pieper, and Hair 2012). After an initial focus on exports, more and more FBs now choose to launch foreign direct investments (FDIs) and produce overseas goods to be sold in both national and international markets (European Commission 2009; Sciascia et al. 2013). Although attractive, opening a new venture abroad requires a significant effort. For most FBs, notably the smallest ones, the switch from exports to more binding foreign activities such as FDIs involves dramatic changes in the organizational design and the distribution of decisional power across the company hierarchy. The coordination of

physical and information flows among production sites located in different countries confronts firms with the need to reconsider their strategies, as well as some of their basic values. Internationalization processes highlight the limitations of the family-centric model and the need for more decentralized solutions (Fernández and Nieto 2005). Nevertheless, the existing empirical evidence suggests that family members and family culture still play a crucial role in internationalized firms (Patel, Pieper, and Hair 2012; Tsang 2002). The competences and capabilities provided by family members often prove to be critical to successful performance in international markets (Graves and Thomas 2008; Lindow, Stubner, and Wulf 2010; Tsang 2002).

The dilemma of “managing continuity in change” is particularly severe for FBs that internationalize by opening new ventures abroad. On one hand, this dilemma concerns the selection of the capabilities that will replicate the

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company's success overseas; on the other, it involves identifying and developing the new competences required for competing in an international arena. Both processes are critical because they involve reassessing the role of the owner family and achieving a new balance between decentralization and control. Thus, the human resources in charge of governing the new venture and coordinating operations with the parent company and other overseas ventures play a crucial role for the success of internationalization strategies (Schuler, Budhwar, and Florkowski 2002).

The literature has long recognized the importance of international human resource management (HRM) to help multinational firms balance between local autonomy and central control (Scullion, Collings, and Gunnigle 2007). However, FB-specific research on internationalization paths only recently emerged (for recent reviews, see Yu et al. 2012; Kontinen and Ojala 2010) and still offers limited knowledge on the processes and strategies that make FBs unique in their international growth. This is even more apparent in the case of international HRM. Whereas consolidated literature exists for large multinational companies (Minbaeva et al. 2003; Schuler, Budhwar, and Florkowski 2002) and smaller firms (Scullion, Collings, and Gunnigle 2007), systematic evidence and comprehensive theoretical frameworks are still missing on how FBs face the challenge of developing skills and competences to take advantage of opportunities in international markets (Abdellatif, Amann, and Jaussaud 2010; Dabić, Ortiz-De-Urbina-Criado, and Romero-Martínez 2011; Litz, Pearson, and Litchfield 2012). The distinctive features of FBs, including focus on family human capital (Dawson 2011), social embeddedness among family members (Patel and Fiet 2011), risk avoidance (Kontinen and Ojala 2010), and paucity of slack resources (Fernández and Nieto 2006), suggest that internationalizing family firms may simply transfer the approach from HRM at home to their foreign ventures. However, there is a risk that the focus on control and internal resources jeopardizes foreign investments by constraining growth opportunities and hampering the internalization of new competences. This risk may encourage family firms to explore alternative models of HRM abroad.

Acknowledging the need for focused empirical research to support empirical and theoretic

cal studies on the drivers underpinning the successful internationalization of FBs, this paper investigates how the distinctive characteristics of family firms affect their approach to HRM abroad. In line with authoritative contributions in the literature on FBs (Chua, Chrisman, and Sharma 1999; Klein, Astrachan, and Smyrniotis 2005; Litz 2008; Sciascia et al. 2013; Sharma 2004), we argue that a dichotomous contrast between FBs and non-FBs does not allow the distinctive features of FBs to be captured. In contrast, a multidimensional characterization of FBs could enrich our understanding of their approach to HRM abroad. We focus our analysis on key organizational attributes highlighted in the literature, namely, ownership, participation of family members in the board of directors, participation of family members in the company managerial team, and presence of young successors.

We propose a framework to conceptualize the role of human resources in internationalization processes based on two opposite mechanisms of organizational learning widely acknowledged in the literature, that is, exploring and exploiting (March 1991). Resource explorers, who take advantage of the competences and personnel provided by the host country, are contrasted with resource exploiters, who consolidate their FDIs by deepening and delocalizing competences and human resources from the parent company.

The data used in the empirical analysis were collected by administering a structured questionnaire to a sample of Italian multinational companies. The empirical analysis focuses on outward FDI, which is a more demanding mode of internationalization than exports and typically involves higher investment costs and committed human resources to manage the overseas venture.

Our analysis provides two main results. First, not all organizational attributes of FBs exert the same effect on the approach to HRM abroad. Whereas participation of family members in the board of directors displays no significant impact, ownership and family managerial models favor the exploitation of the human resources supplied by the parent company. In contrast, the involvement of young successors favors the exploration of human resource abroad. Second, a multidimensional approach has better explanatory power in explaining the attitude toward the HRM abroad compared with a dichotomous classification of FBs.

The rest of the paper is organized as follows. The next section surveys the literature on international HRM and FBs. The third section typifies different approaches to HRM abroad and identifies the key organizational dimensions of FBs based on the literature. The research hypotheses that drive our empirical analysis are derived from discussing the potential impact of FB's organizational dimensions on the approach to HRM at overseas ventures. The following section presents the sample and the empirical methodology. The fifth section discusses the results of our empirical analyses before the last section provides some concluding remarks.

FBs and HRM in Foreign Ventures

The literature on HRM in FBs has long centered on the duality between family and business.¹ Participation of family members in the company business provides the main rationale not only for the strong emphasis on succession and top leadership (Astrachan and Kolenko 1994; Le Breton-Miller and Miller 2009; Sharma and Irving 2005) but for the preference for family managers vis-à-vis external managers (Lubatkin et al. 2005). Compared with non-FBs, family firms display a stronger focus on informal HRM tools, often based on trust and personal relationships among family members and employees (Basco and Perez Rodriguez 2009). HRM in FBs is characterized by tenure-based promotions, low autonomy of personnel in decision-making, and focus on activities enhancing family-business links (Basco and Perez Rodriguez 2011). Wage inequality among the members of the top managerial team is lower in FBs compared with non-FBs (Ensley, Pearson, and Sardeshmukh 2007). All these characteristics reflect the owner family's attempt to keep control and influence over the business (Le Breton-Miller and Miller 2009), but also the socio-emotional commitment that drives family members to extend their concern to all stakeholders involved in the business (Zahra 2003).

In principle, the distinctive features of HRM in FBs have a controversial impact on the capability of family firms to take advantage of growth opportunities abroad (Patel, Pieper, and Hair 2012). On the one hand, the long-term orientation and the shared vision that characterize FBs support the lengthy and often non-linear learning paths in foreign markets. In addition, informal decision-making in a team of close and mutually committed managers provides timely reaction to events in the new competitive environment and reduces monitoring costs between the parent company and the overseas venture. Nevertheless, preference for internal resources, risk aversion, and resistance to power delegation can constrain the internationalization paths of FBs and limit both learning and business opportunities abroad.

Despite the potential impact on the success of overseas ventures, the relationship between FB's distinctive characteristics and the role of human resources in foreign ventures has so far been neglected by FB studies. Only a few of the 25 studies on the internationalization of FBs reviewed by Kontinen and Ojala (2010) focus on how the human resources of the parent and subsidiary companies impact the success of an overseas venture. Early contributions already identified difficulties in accepting external expertise and resistance to hiring external managers with international experience as important obstacles to the internationalization of family firms (Gallo and Sveen 1991). Some authors evidence a negative relationship between FB's organizational attributes and internationalization and suggest that this finding may be explained by the scarcity of managerial and professional skills to compete internationally (Arbaugh, Camp, and Cox 2008; Fernández and Nieto 2005). However, only few studies explicitly focus on the mechanisms underpinning FB-specific HRM and international growth. The role played by expatriate family members, the autonomy of managers in charge of the overseas ventures, and the external sources of international expertise are among the issues explored.

¹Despite the growing empirical evidence, a comprehensive theoretical model of HRM in family firms is still missing. In their review of the recent literature of HRM in entrepreneurial and family firms, Dabić, Ortiz-De-Urbina-Criado, and Romero-Martínez (2011) suggest that this gap may depend on the intrinsic contrast between the individual nature of entrepreneurship and the collective, process-based nature of HRM, typically based on coordination among different professionals.

Tsang (2002) notes the different expatriation policies adopted by FBs and non-FBs in the case of a sample of Singapore companies running FDIs in China. Whereas FBs tend to assign long-term appointments as managers of foreign ventures to family members, nonfamily firms show a preference for rotating their expatriate managers. Gallo and Pont (1996) support a beneficial impact of family commitment to the intensity of the internationalization process by showing that expatriate family members are associated with a higher ratio of sales from FDIs to total company sales. However, Graves and Thomas (2008) suggest that the expatriation of family members is a potential source of conflict for the owner family, because assignments to foreign ventures strain not only the managers involved but also their spouses and children.

Direct visits of family members to foreign ventures provide an alternative to expatriation that allows family firms to keep close control over their activities abroad (Tsang 2002). Direct visits allow the socialization of FDI-specific knowledge among family members, but may limit the exploration of the opportunities provided by the new market. Based on case studies, Thomas and Graves (2005) suggest that autonomy in decision-making for the family managers in charge of a foreign venture increases the probability of achieving the benefits expected from internationalization paths.

In line with the distinctive features of FBs, Graves and Thomas (2006) show that FBs are less likely to appoint new managers in support of internationalization processes. However, the recruitment of external managers with the required experience and knowledge helps family firms to overcome the obstacles to international growth due to limited managerial capabilities (Graves and Thomas 2008). The importance of external sources of expertise for internationalized FBs is supported by the study of Crick, Bradshaw, and Chaudhry (2006) on a sample of U.K. firms awarded with a national prize for excellent performance in international markets. The authors show that both FBs and non-FBs make use of similar bundles of resources to support their international growth. In addition, both FBs and non-FBs actively seek the advice of external consultants and the contribution of competent newly recruited managers to speed up the absorption of the skills and competences required for successful competition abroad.

The multifaceted picture of the relationship between FBs and HRM abroad emerging from the available literature is probably due to the relative novelty of research on FB internationalization. In addition, mixed results may be explained by the intrinsic heterogeneity of FBs (Chua et al. 2012) that gives room to different behavioral models (Basco and Perez Rodriguez 2011; Graves and Thomas 2008; Thomas and Graves 2005). Uhlaner et al. (2012) underline that the “traditional” paradigm of the “defensive” family firm focused on internal resources and control is complemented by the more innovative configuration of the entrepreneurial family firm that pays close attention to innovation, learning, and exploration of new opportunities.

Acknowledging FBs as a heterogeneous category of economic players, we stress the need to open the black box of the organizational models that drive the behavior of family firms also in the case of internationalization processes.

Research Hypotheses

We classify the approach to HRM in overseas ventures by contrasting the two opposite, yet not mutually exclusive, mechanisms of organizational learning based on knowledge exploration and knowledge exploitation (March 1991). Whereas exploration involves the development of additional skills and competences in new knowledge domains and the experimentations of innovative yet uncertain solutions, exploitation is based on the incremental refinement of existing solutions and the search for efficiency in current knowledge domains. March stresses that “both exploration and exploitation are essential for organizations, but they compete for scarce resources. As a result, organizations make explicit and implicit choices between the two” (1991, p.71).

Exploration and exploitation have become frequent concepts to categorize and interpret firm behavior (Lavie, Stettner, and Tushman 2010) and we resort to these constructs to identify opposite approaches to HRM in overseas ventures. Firms that consolidate their FDIs mainly by deepening and delocalizing competences and human resources from the parent company through expatriate managers and highly skilled personnel fall into the category of “resource exploiters.” In contrast, “resources explorers” make use of the skills and competences of highly qualified personnel

recruited in the host country to speed up the acquisition of country-specific and FDI-specific knowledge.

Both the mechanisms of resource exploring and resource exploiting are well known and documented in the literature on international HRM (see, e.g., Armagan and Portugal Ferreira 2005). Resource exploiters make extensive use of expatriate managers and technicians endowed with comparatively low autonomy to control their foreign activities via shared explicit and tacit knowledge about procedures, technologies, and corporate values (Tan and Mahoney 2003). In contrast, the importance that resource explorers attach to direct experience of markets and institutions in the host country motivates the recruitment of foreign qualified human resources. Resource explorers grant greater autonomy to the mostly indigenous managers of their foreign ventures and encourage their contributions to the organizational knowledge base (Minbaeva et al. 2003).

A framework for the classification of the attitude toward HRM abroad is the first building block to focus our research hypothesis. The second is the identification of the key dimensions that characterize FBs. This is a challenging task, because there is no clear consensus on the theoretical definition of a FB and agreement on an operational definition including all possible cases has not yet emerged (see, e.g., Di Toma and Montanari 2010; Klein, Astrachan, and Smyrniotis 2005; Astrachan, Klein, and Smyrniotis 2002; Chua, Chrisman, and Sharma 1999). Most researchers agree that the empirical identification of FBs has to account for multiple dimensions, usually including family ownership and family involvement in the firm's operations (Chua, Chrisman, and Sharma 1999; Gallo and Sveen 1991; Graves and Thomas 2006, 2008; Villalonga and Amit 2006; Zahra 2003). The studies on FB international growth also usually identify FBs according to the organizational attributes mentioned earlier. The review of 25 studies of FB internationalization developed by Kontinen and Ojala (2010) reports that 6 papers define FBs based on either ownership or participation in business management, sometimes accompanied by other criteria, and 14 papers identify FBs based on a combination of ownership and participation in business management, in 2 cases accompanied by further criteria.

In addition, researchers are careful to avoid artificial dichotomous categorizations between family and nonfamily firms that may bias the outcomes of empirical analyses (Chua, Chrisman, and Sharma 1999; Klein, Astrachan, and Smyrniotis 2005). Rather than opposite categories, FBs and non-FBs are perceived as the extremes of a continuum where the degree of membership in the FB model is driven by the interplay among the different dimensions that shape the business behavior.

Drawing on the suggestions mentioned earlier, our empirical analysis adopts an operational definition of FB based on multiple dimensions of family ownership and family involvement in the firm's operations, including the share of equity controlled by the owner family, the presence of family members on the board of directors, the participation of family members in the company managerial team, and the involvement of successors (Astrachan, Klein, and Smyrniotis 2002; Klein, Astrachan, and Smyrniotis 2005; Sciascia et al. 2013). The research hypotheses on how these dimensions are expected to impact the FBs' attitudes of either exploring the human resources provided by the host country or exploiting the skills of the parent company personnel are based on FB literature.

Past studies underline that family-owned firms are reluctant to adopt solutions that may reduce family control (Casillas, Moreno, and Acedo 2010) also in the case of international ventures. Family-owned firms are less likely to hire external managers because of the founder's resistance to renouncing control (Boeker and Karichalil 2002), entrenched nepotism (Kets de Vries 1996), and preference for privacy (Gersick et al. 1997). Coherently, we expect that family-owned firms will adopt an exploiting attitude and exert strong control over the foreign venture by means of frequent visits by family members or expatriate domestic managers. In line with Collings, Scullion, and Morley (2007), we argue that direct visits and expatriates serve as a means of addressing the agency issues that arise from the separation between ownership and management due to the distance between the parent company and the foreign affiliate. Reliance on domestic managers trusted by family members to act in the interests of the owner family minimizes agency problems. Based on the considerations presented earlier, we formulate the following hypothesis.

H1: Family ownership favors management of overseas ventures based on the exploitation of the human resources provided by the parent company.

Naldi and Nordqvist (2009) show that the international scope of a firm and its expansion abroad is favored by opening the board of directors to the participation of nonfamily members. The presence of external associates affects power dynamics and can facilitate an exploratory attitude by granting greater autonomy to foreign indigenous managers. More in general, past studies have demonstrated that family involvement in the board of directors reduces the strategic independence of the managerial team and limits the access to critical resources for internationalization (Calabrò, Mussolino, and Huse 2009; Filatotchev, Isachenkova, and Mickiewicz 2007). In line with the contributions mentioned earlier, we argue that the higher the share of family members in the board of directors, the stronger the probability of supporting the exploitation of existing human resources abroad instead of recruiting new foreign managers. Our second hypothesis is detailed as follows.

H2: The participation of family members in the board of directors favors management of overseas ventures based on the exploitation of the human resources provided by the parent company.

The family managerial model, characterized by the direct involvement of the entrepreneurs and their relatives in the company management, the extensive resort to direct supervision, and the strong correlation between entrepreneurial insight and operative decisions, appears intuitively to be connected with an approach to HRM abroad oriented toward the exploitation of existing human resources. Expatriate managers and technicians favor direct control of the international activities and the sharing of organizational knowledge. In contrast, separation between ownership and management in the parent company is expected to favor decentralization processes also in foreign subsidiaries and staffing of externally available human resources. The presence of family managers decreases the likelihood that entry in international markets involves a high level of resource commitment (Claver, Rienda, and Quer 2009),

because family directors prefer more conservative business strategies (Claessens et al. 2002). Calabrò, Mussolino, and Huse (2009) show that nonfamily directors provide easier access to knowledge and capabilities useful for the internationalization of family firms. Consequently, the participation of family members in the managerial team of the parent company is expected to decrease the probability of an explorative attitude toward HRM abroad. The observations just described suggest the following hypothesis.

H3: The participation of family members in the managerial team of the parent company favors management of overseas ventures based on the exploitation of the human resources provided by the parent company.

Younger successors often represent a source of discontinuity with past strategies and promote the recruitment of external managers and professionals (Graves and Thomas 2008; Okoroafo 1999). In fact, the entry of successors in the business is frequently associated with the introduction of new business ideas and with at least partial delegation of leadership and control by the previous generation of firm owners (Sardeshmukh and Corbett 2011). Moreover, the presence of multiple generations of family members creates an organizational culture that encourages risk taking and exploration of new opportunities. Both elements support a positive impact of successors on the probability to adopt an exploratory attitude toward HRM abroad. Specifically, our hypothesis is the following.

H4: The participation of successors favors management of overseas ventures based on the exploration of the human resources available in foreign markets.

Most previous studies on the internationalization of family firms adopt a dichotomous definition of family and non-FBs (Kontinen and Ojala 2010) and treat both groups as homogeneous clusters from the point of view of FB characteristics. In contrast, our study examines the separate effects of four organizational attributes of FBs, assuming that the degree of alignment with FB characteristics chosen by each firm can vary across different FB dimensions. By adopting this approach, we acknowledge the heterogeneity of family firms and are able

to assess what different dimensions of family ownership and family involvement in the firm's operations actually influence the attitude toward the HRM abroad (Klein, Astrachan, and Smyrnios 2005; Sciascia et al. 2013). Concluding, we argue that dichotomous variables for FBs, based for example on ownership and at least one form of family participation in business management, have a lower explanatory power than the four distinct characteristics of FBs in explaining the explorative or exploitative attitude in foreign markets. Accordingly, our last hypothesis is as follows.

H5: Multidimensional organizational attributes of FB have more explanatory power in explaining the attitude toward HRM compared with a dichotomous classification of family and nonfamily firms.

The Empirical Setting

Data were collected in early 2008, before the start of the current economic and financial crisis. This means that any contingent effects of the economic cycle on our results can be excluded. Target parent companies were identified through a random selection of 3 percent of the multinational companies located in Northern Italy and listed by Reprint. The Reprint data set provides a yearly updated census of the foreign affiliates of Italian firms since 1986² (for additional details, see Mariotti and Mutinelli 2012). Short telephone and e-mail questionnaires were submitted to the managers in charge of running operations abroad. In the case of multiple foreign investments, we asked respondents to focus on their most strategic FDI. The questionnaire included three sections. The first collected general information about the firm and data to identify the governance model adopted. The second examined the HRM system in the Italian headquarters. The last section concerned the management of human resources in the most strategic foreign subsidiary held by the interviewed firms. Collected information was subsequently cross-checked

with balance sheet data from AIDA (Analisi Informatizzata delle Aziende Italiane) (Bureau van Dick), information obtained from public documents, and the web.

The response rate was 20.1 percent. Nonrespondent bias was examined by comparing the sample of respondent firms with the Reprint data for the population of Italian multinational firms located in Northern Italy in relation to two different FDI characteristics, that is, mode of entry and mode of control. Statistical tests confirmed that survey respondents did not significantly differ from the reference universe in relation to the examined dimensions.³ A follow-up survey of nonrespondents showed that the most frequently reported motivations for nonparticipation were the economic difficulties faced by the firm, the failure of the FDI initiative, and the absence of the personnel manager due to mission abroad.

The empirical sample used to investigate the impact of FB dimensions on the approach to HRM abroad consists of 123 Italian companies that went overseas via 258 FDIs in 25 different countries. FDIs usually involve greater effort than exports, including investment in human resources. This choice is expected to provide a clearer picture of the attitude to HRM abroad by sampled companies.

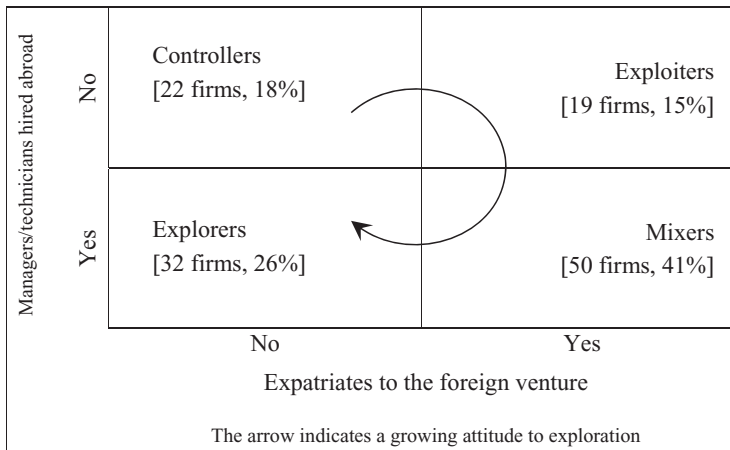
The Approach to Human Resources Abroad

As anticipated earlier, the classification of the different approaches to HRM abroad builds upon the concepts of resource exploration and resource exploitation. The different attitudes toward international HRM by the parent company are based on two binary variables that provide a concise picture of staffing policies abroad. The first variable takes the value 1 if the sampled company reports recruitment of local qualified personnel (technicians or executives) in the foreign venture and signals the willingness to take advantage of market-specific knowledge and competences. The second variable takes the value 1 if the sampled

²Reprint classifies FDIs based on the actual location of economic activities. We were consequently able to exclude foreign investments made by financial firms, investment funds, private equity funds, and merchant banks as part of management buyouts and when there is no direct participation in the management of the investee company.

³ χ^2 tests on the distribution of firms by mode of entry in the foreign market and type of control over the overseas venture show nonsignificant difference between sampled firms and the population of Italian multinational firms ($\chi^2(1) = 0.522$, $p = .470$ and $\chi^2(1) = 0.217$, $p = .641$, respectively).

Figure 1
Classification of Attitudes toward Human Resource Management (HRM) Abroad



company ever expatriated Italian employees or managers and indicates the disposition to keep the foreign venture under control.

By crossing these two dummy variables, we obtained four distinct clusters (Figure 1). The cluster named *Controllers* includes those companies that neither delegate decisional power to host country managers nor assign expatriates to run the foreign venture and exert direct control on their FDI through frequent on-site visits by managers from the parent company. The members of the *Explorer* and *Exploiter* clusters show the largest differences in staffing policies abroad. Whereas the former hire qualified employees for their international venture only in the foreign labor market, the latter resort exclusively to domestic expatriates. The members of the *Mixers* cluster adopt both policies, falling between *Explorers* and *Exploiters*.

According to the proposed classification, the propensity to explore the skills and knowledge provided by human resources recruited in the host country increases from *Controllers* to *Exploiters*, *Mixers*, and *Explorers*. Thus, the four clusters, ordered by growing propensity to resource exploration, provide the dependent variable for testing our research hypotheses. This variable, named HRM abroad, takes discrete values from 1 for conservative *Controllers* to 4 for proactive *Explorers*.

Organizational Attributes of FBs

In line with our research hypotheses, we operationalize FBs through the key dimensions of ownership, presence of family members on the board of directors, participation of family members in the company managerial team, and involvement of successors. The variable *Ownership* assesses whether the parent firm is owned by a family. It is a binary variable equal to 1 if a non-listed firm is majority-owned by the family or a listed firm is owned by the family no less than 20 percent, 0 otherwise (Cascino et al. 2010). The share of family representatives who are members of the board of directors (variable *Board_of_Directors*) is a proxy for the governance structure (Carney 2005). Perfect managerial governance is characterized by complete separation of ownership and control, thereby splitting management and risk-bearing functions (De Kok, Uhlaner, and Thurik 2006; Fama and Jensen 1983). In contrast, direct involvement of family members in the business (variable *Family_managers*) is assumed to reflect the characteristics of the family managerial model (Dyer 2003). *Family_managers* is a binary variable equal to 1 if at least one family member participates in the managerial team of the parent company, 0 otherwise. The last FB organizational attribute included in our analysis is the participation of at least one young family successor in the business (variable *Successor*).

Successor is a binary variable equal to 1 if at least one young family member has an active role in the firm, 0 otherwise.

To test our last hypothesis and confirm whether a multidimensional approach has more explanatory power than a dichotomous classification of FBs, we built a synthetic indicator named *dichotomous_FB*. Based on the approach most frequently adopted by prior studies on FB internationalization (Kontinen and Ojala 2010), we computed *dichotomous_FB* as a binary variable equal to 1 if both *Ownership* and *Family_managers* are equal to 1, 0 otherwise.

The Econometric Model

Given the ordinal nature of the dependent variable and the difficulty of quantifying the “distance” between the subsequent values it takes, an ordered model appears to be the best functional form to test its determinants (Green 1993; Sciascia et al. 2013). Ordered regressions model the dependence of a polytomous ordinal response on a set of either numerical or categorical predictors. In particular, the ordered logit model estimates the effects of independent variables on the log odds of having lower rather than higher scores on the dependent variable. If an ordered dependent variable *Y* can assume *J* distinct values, the relationship between the log odds ratio and *K* independent regressors X_k can be expressed in the following way:

$$\ln\left(\frac{p(Y \leq j|X_k)}{p(Y > j|X_k)}\right) = \alpha_j - \sum_{k=1}^K \beta_k X_k, \text{ for } j = 1 \text{ to } J - 1,$$

where α_j is the intercepts indicating the log odds of lower rather than higher scores when all independent variables are equal to 0, and β_k represents the change in the log odds corresponding to a unit increase in x_k . Therefore, e^{β_k} represents the odds ratio corresponding to a unit increase in x_k and is called the odds ratio of x_k . Because odds ratios of independent variables do not depend on *j*, the ordered logit model is also called proportional odds model (Norušis 2006).

The estimated ordered logit models assess the impact of the FB characteristics on the approach to human resources abroad controlling for firm and investment-specific effects.

The first model tests H1 through H4 by assessing the separate impact of the share of equity controlled by the owner family, the presence of family members on the board of directors, the participation of family members in the company’s managerial team, and the involvement of successors on the odds of being an Explorer rather than a Controller (Model 1).

(Model 1)

HRM_abroad

= f(*Ownership*, *Board_of_Directors*;
Family_managers; *Successor*;
Control variables)

The second model (Model 2) controls for the synthetic indicator named *Dichotomous_FB*. By comparing the explanatory power of Model 1 and Model 2, we will test the superior explanatory power of the specification including four different characteristics of FB compared with the dichotomous classification of FBs (H5).

(Model 2)

HRM_abroad

= f(*Dichotomous_FB*; Control variables)

Control Variables

In addition to FB-specific characteristics, firm and investment-specific variables are included in the analysis as control variables (see Table 1 for a description of dependent and explanatory variables).

Firm-specific effects that impact internationalization choices typically include firm size, firm age, international experience, and industry (Dunning and Lundan 2008). Firm size and firm age proxy for accumulated organizational knowledge and experience both in domestic and international markets and usually display a positive correlation with managerial knowledge (Camisón and Villar-López 2010). Firm size (variable *Firm_size*) is measured by the logarithm of the number of employees, whereas the variable *Firm_age* is defined as the logarithm of firm age.

Firms that accumulated international experience through previous outward FDIs may be endowed with better skills to explore foreign resources and may be more likely to assume a proactive attitude toward international HRM (Jaskiewicz et al. 2005). We proxy overall international experience through the variable

Table 1
Definition of the Variables Used in the Empirical Analyses^a

Variable	Definition
<i>Dependent Variable</i>	
HRM abroad	Categorical variable that takes value 1 for the cluster of Controllers, 2 for Exploiters, 3 for Mixers, and 4 for Explorers
<i>Family Business</i>	
Ownership	Dummy variable equal to 1 if a non-listed firm is majority-owned by the family or a listed firm is owned at 20 percent, 0 otherwise
Board_of_Directors	Share of family representatives who are members of the board of directors (percent)
Family_managers	Dummy variable equal to 1 if at least one family member is a manager, 0 otherwise
Successors	Dummy variable equal to 1 if at least one younger family member has an active role in the firm, 0 otherwise
Dichotomous_FB	Dummy variable equal to 1 if both Ownership and Family_managers are equal to 1, 0 otherwise.
<i>Firm Characteristics</i>	
Firm_size	Logarithm of firm size (number of employees)
Firm_age	Logarithm of firm age (years)
International_experience	Logarithm of the number of past FDIs (number of FDIs)
Supplier_dominated	Dummy variable equal to 1 if the parent company is in a supplier-dominated industry, 0 otherwise
Scale_intensive	Dummy variable equal to 1 if the parent company is in a scale-intensive industry, 0 otherwise
Specialized_supplier	Dummy variable equal to 1 if the parent company is in a specialized supplier industry, 0 otherwise
Science_based	Dummy variable equal to 1 if the parent company is in a science-based industry, 0 otherwise
<i>FDI Characteristics</i>	
Minority	Dummy variable equal to 1 if the foreign affiliate is minority-owned by the parent company, 0 otherwise
Greenfield	Dummy variable equal to 1 if the foreign affiliate started as a greenfield investment, 0 otherwise
Industrialized_country	Dummy variable equal to 1 for FDIs are located in industrialized country, 0 otherwise
Production_site	Dummy variable equal to 1 if FDI activities include manufacturing, 0 for commercial subsidiaries

^aFDI, foreign direct investment.

International_experience, measured as the logarithm of the number of FDIs launched before the FDI reported in the interview.

Because of the significant impact of industry on internationalization paths (Villalonga and Amit 2010), we also include industry dummies as further controls. Based on the classification introduced by Pavitt (1984), four binary variables signal whether the parent company belongs to a supplier-dominated sector, a scale-

intensive sector, a specialized supplier sector, or a science-based sector.

In the case of investment-specific variables, existing studies usually include the mode of entry in a foreign market and the type of destination country among FDI-specific characteristics that impact HRM abroad (Delios and Bjorkman 2000). Some authors argue that modes of entry involving lower commitment and lower investment such as foreign minority

stakes encourage a proactive attitude toward HRM abroad. In the case of foreign minority stakes, local partners usually provide expertise in the local context and share management duties (Esperança, Hill, and Valente 2006). However, other authors claim that staffing foreign branches with expatriates substitutes full ownership as a means of control (Beamish and Inkpen 1998; Konopaske, Werner, and Neupert 2002). We test the impact of equity control over the foreign venture through *Minority*, a binary variable equal to 1 if the foreign affiliate is minority-owned by the parent company. Another dimension of entry mode that is expected to impact the approach toward HRM abroad is the choice between acquisition and greenfield investment. Acquisitions take advantage of leverage on the skills and competences already existing at the foreign branch. In contrast, greenfield investments exploit the parent company's human resources to exert control on the foreign venture (Delios and Bjorkman 2000). The relationship between the type of investment and HRM abroad is tested by *Greenfield*, a binary variable equal to 1 if the foreign affiliate started as a greenfield investment.

Past literature documents a propensity to explore local resources in the case of FDIs targeting industrialized countries, because of the greater availability of local managers and technicians and the higher costs of expatriation compared with developing countries. In countries with limited availability of local managers and technicians, the parent company relies more extensively on an exploiting attitude (Gaur, Delios, and Singh 2007). The variable *Industrialized_country*, which takes the value 1 for FDIs targeting industrialized countries, tests the impact of the destination country over the probability of an exploratory attitude toward HRM abroad.

We also control for the nature of the activity performed in the FDI site. The binary variable *Production_site* takes the value of 1 when the foreign branch manufactures physical goods and 0 when it is a commercial subsidiary.

Results of the Empirical Analysis

A Statistical Analysis of the Approach to Human Resources Abroad

A preliminary test of our research questions is provided by crossing the approach to HRM abroad, as described by the four clusters used to classify the attitude toward HRM abroad

(Figure 1), with a set of variables that describe the multiple dimensions of family ownership and family involvement in the firm's operations as well as firm-specific and FDI-specific variables usually considered in the literature on international HRM (see, e.g., Delios and Bjorkman 2000).

Table 2 reports the mean values of the variables that account for FB-specific, firm-specific, and FDI-specific effects by cluster. The first panel of Table 2 suggests that the key dimensions of FBs have a differentiated impact on the approach to HRM abroad. The share of firms directly controlled by the owner family progressively increases from Controllers to Explorers, with Explorers showing the lowest share of family-owned firms. The proportion test between Explorers and the rest of the sample is significant at $p < .01$. However, the proportion test signals that the share of firms controlled by an owner family is not significantly different from the rest of the sample for Controllers, Exploiters, and Mixers. An opposite pattern holds in the case of participation of family members in the board of directors and in the company's managerial team, both decreasing from Controllers to Explorers. The share of family representatives who are members of the board of directors is highest among Controllers and significantly different from the rest of the sample ($p < .05$). In contrast, Explorers show the lowest involvement of family members in the business (proportion test between Explorers and the rest of the sample is significant at $p < .10$). Participation by younger successors does not display a clear pattern and there are no statistically significant differences among clusters.

When membership in the category of FB is conditioned upon compliance both with a hurdle level of ownership and participation of family members in the managerial team (variable *dichotomous_FB*), the percentage of FBs progressively decreases from Controllers to Explorers. Firms in the Controllers cluster show the highest percentage of FBs (proportion test between Controllers and the rest of the sample significant at $p < .10$). Contrary to our expectations, the test for the other clusters is not significantly different from 0.

Notwithstanding the suggestions from the literature, the data in the second panel of Table 2 do not support a clear relationship between firm-specific features and HRM abroad. Firm size, firm age, industry, and international expe-

Table 2
FB, Firm-Specific, and FDI-Specific Characteristics by Attitude toward HRM Abroad^a

	Controllers (22 Firms)		Exploiters (15 Firms)		Mixers (50 Firms)		Explorers (32 Firms)	
	Mean/ Percent	Standard Deviation	Mean/ Percent	Standard Deviation	Mean/ Percent	Standard Deviation	Mean/ Percent	Standard Deviation
<i>Family Business</i>								
Ownership ^b	90.9 percent	0.29	84.2 percent	0.37	88.0 percent	0.33	65.6 percent***	0.48
Board_of_Directors ^c	57.3 percent**	0.33	45.2 percent	0.32	42.6 percent	0.31	40.6 percent	0.33
Family_managers ^b	68.2 percent	0.48	68.4 percent	0.48	54.0 percent	0.50	46.9 percent*	0.51
Successors ^b	50.0 percent	0.52	42.1 percent	0.51	50.0 percent	0.50	50.0 percent	0.51
Dichotomous_FB ^b	68.2 percent*	0.10	57.8 percent	0.12	48.0 percent	0.07	40.6 percent	0.09
<i>Firm Characteristics</i>								
Firm_size ^c	2.34**	0.67	2.64	0.41	2.87***	0.77	2.48*	0.71
Firm_age ^c	1.38	0.60	1.52	0.28	1.48	0.47	1.49	0.43
International_experience ^c	0.36*	0.30	0.48	0.28	0.58***	0.41	0.39*	0.30
Supplier_dominated ^b	40.9 percent	0.50	36.8 percent	0.49	24.0 percent	0.43	28.2 percent	0.46
Scale_intensive ^b	9.2 percent***	0.29	36.8 percent	0.49	38.0 percent	0.49	40.6 percent	0.50
Specialized_supplier ^b	31.9 percent	0.48	26.4 percent	0.45	28.0 percent	0.45	31.2 percent	0.47
Science_based ^b	18 percent**	0.39	0.0 percent*	0.0	10.0 percent	0.30	0.0 percent**	0.00
<i>FDI Characteristics</i>								
Minority ^b	13.6 percent	0.35	15.8 percent	0.37	8.0 percent*	0.27	25.0 percent**	0.44
Greenfield ^b	59.1 percent	0.50	73.73 percent*	0.45	54.0 percent	0.50	40.6 percent**	0.50
Industrialized_country ^b	27.3 percent***	0.46	31.6 percent **	0.48	66.0 percent***	0.48	65.6 percent*	0.48
Production_site ^b	31.8 percent	0.10	47.4 percent*	0.12	18.0 percent**	0.05	34.4 percent	0.08

^aFB, family business; FDI, foreign direct investment; HRM, human resource management.

^bProportion test between each cluster and the rest of the sample (percent).

^ct-Test between each cluster and the rest of the sample (mean).

*Significant at the 10 percent level; **significant at the 5 percent level; ***significant at the 1 percent level.

rience do not vary monotonically from Controllers to Explorers. The statistical analysis reported in Table 2 provides partial support for the role played by FDI-specific variables. Explorers display the highest propensity to minority stakes and the lowest propensity to greenfield investments (respectively 25.0 percent and 40.6 percent of FDIs). However, these variables do not vary monotonically with the propensity to an explorative attitude toward HRM abroad. In contrast, and in line with past literature, the share of FDIs targeting industrialized countries progressively increases from Controllers to Explorers. The probability of locating the most strategic FDI in an industrialized country is significantly lower among Controllers (proportion test between Controllers and the rest of the sample is significant at $p < .01$) and Exploiters (proportion test between Exploiters and the rest of the sample is significant at $p < .05$) compared with the rest of the sample. In contrast, 7 out of 10 Explorers located their most strategic FDI in an industrialized country (proportion test between Explorers and the rest of the sample is significant at $p < .05$). Finally, the share of FDIs involving manufacturing activities (variable *Production_site*) is highest among Exploiters and equal to 47.4 percent (t-test between Exploiters and the rest of the sample is significant at $p < .10$), with an inverse U-shaped curve across clusters.

Output of the Econometric Estimates

The regressions to test the research hypotheses via econometric estimates were run by using PASW Statistics 17.0 (IBM Corporation, New York, USA), which models the ordinal regression through the PLUM methodology derived from McCullagh (1980). The correlation matrix (Table 3) shows acceptable correlation indexes between regressors. Table 4 reports the output of the ordinal regressions that test the impact of four distinct FB organizational attributes (Model 1) and a synthetic indicator of FB membership (Model 2) on HRM abroad. Both the estimates reported in Table 4 display a high level of fit and comply with the parallel-line assumption that the estimated coefficients do not vary across categories. The test of parallel lines is $\chi^2(24) = 27.953$ ($p = .262$) for Model 1 and $\chi^2(18) = 22.286$ ($p = .220$) for Model 2, respectively. The introduction of *Firm_size* and *International_experience* as regressors makes the estimated ordered logit models violate the

parallel lines assumption, perhaps because of the non-monotonic relationship between firm-specific variables that usually explain the propensity to go abroad and the attitude toward exploring human resources in the host country. These variables have therefore been excluded from the empirical analysis.

In line with the researchers who suggest that the concentration of ownership in the hands of the entrepreneurial family may hinder an exploratory approach (Arbaugh, Camp, and Cox 2008; Arregle et al. 2012), our findings support H1 (Table 4, Model 1). Family-owned firms have higher odds of pursuing the exploitation of the human resources supplied by the parent company compared with the exploration of human resources recruited in the host country (Ownership is negative and significantly different from 0 at $p < .10$).

In contrast with our expectations that the composition of the board of directors would affect the attitude toward HRM abroad (H2), the results show that family governance structure does not exert a significant effect (the coefficient of *Board_of_Directors* is not significantly different from 0). This finding suggests that the composition of the board of directors in family firms may reflect the need for representativeness rather than the actual distribution of decisional power.

The results of the econometric regression in Model 1 also support H3, revealing that participation of family members in the company managerial team favors an exploiting attitude (the coefficient of *Family_managers* is negative and significant at $p < .05$). In line with the authors who show that family managers slow down internationalization processes (Cerrato and Piva 2012), our results suggest that family involvement in the managerial staff reduces the firm's capability to adopt an explorative attitude in the foreign markets.

H4 concerns the impact of young successors' active role in the business and shows the positive impact of younger family members on the probability of adopting an explorative attitude toward HRM abroad. The coefficient of *Successor* is positive and significant at $p < .10$. Also in the case of HRM in overseas ventures, young successors promote reassessing the role of the owner family and achieving a new balance between decentralization and control.

The coefficient displayed by the *Dichotomous_FB* in the second estimate of Table 4 (Model 2) is negative and significant

Table 3
Correlation Matrix^a

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
HRM abroad	(1) 1														
Ownership	(2) -0.196*	1													
Board_of_Directors	(3) -0.176	0.436**	1												
Family_managers	(4) -0.165	0.236**	0.271**	1											
Successor	(5) 0.018	0.201*	0.425**	0.324**	1										
Dichotomous_FB	(6) -0.191*	0.478**	0.295**	0.892**	0.334**	1									
Firm_age	(7) 0.066	-0.071	-0.136	0.022	-0.090	0.001	1								
Supplier_dominated	(8) -0.115	0.167	-0.012	0.070	-0.073	0.108	0.070	1							
Scale_intensive	(9) 0.206*	-0.030	0.041	-0.012	0.069	0.000	0.070	-0.464**	1						
Specialized_suppliers	(10) 0.001	-0.119	-0.040	-0.054	-0.056	-0.123	-0.083	-0.422**	-0.455**	1					
Science_based	(11) -0.173	-0.032	0.015	-0.008	0.101	0.024	-0.105	-0.184*	-0.199*	-0.181*	1				
Minority	(12) 0.079	0.013	-0.078	-0.151	-0.036	-0.102	0.254**	0.080	0.049	-0.064	-0.116	1			
Greenfield	(13) -0.160	-0.128	0.057	-0.037	0.108	-0.076	-0.041	-0.041	0.092	-0.094	0.069	-0.083	1		
Industrialized_country	(14) 0.310**	-0.221*	-0.192*	-0.051	0.026	-0.091	0.034	-0.101	0.035	-0.011	0.136	-0.077	-0.195*	1	
Production_site	(15) 0.051	0.073	0.000	0.054	-0.087	0.016	0.046	-0.085	0.190*	-0.057	-0.094	0.014	-0.014	-0.096	1

^aFB, family business; HRM, human resource management.

*Significant at the .05 level; **significant at the .01 level.

Table 4
The Determinants of the Approach toward HRM Abroad^a

	Model 1		Model 2	
	β	Standard Error	β	Standard Error
<i>HRM Abroad (Threshold)</i>				
Controllers	-5.765***	1.761	-4.934***	1.669
Exploiters	-4.755***	1.736	-3.941**	1.646
Mixers	-2.616	1.696	-1.891	1.615
Explorers (Baseline)				
<i>Dimensions of Family Business</i>				
Ownership	-0.978*	0.540		
Board_of_Directors	-0.534	0.649		
Family_managers	-0.757**	0.382		
Successors	0.652*	0.404		
Dichotomous_FB			-0.759**	0.350
<i>Firm Characteristics</i>				
Firm_size	0.144	0.388	0.162	0.381
Supplier_dominated ^b	1.379**	0.734	1.158	0.723
Scale_intensive ^b	2.021***	0.732	1.900***	0.726
Specialized_supplier ^b	1.516*	0.731	1.348*	0.722
<i>FDI Characteristics</i>				
Minority	0.342	0.521	0.418	0.509
Greenfield	-0.695*	0.370	-0.501	0.356
Industrialized_country	1.000***	0.381	1.195***	0.370
Production_site	0.194	0.387	0.055	0.379
Number of Observations: 123				
Pseudo R^2 (Nagelkerke)		0.260		0.222

^aFB, family business; FDI, foreign direct investment; HRM, human resource management.

^bBaseline: science based.

*Significant: at the 10 percent level; **at the 5 percent level; ***at the 1 percent level.

Ordered regression models. Link function: Logit.

($p < .05$). This outcome suggests that family firms identified through ownership and involvement of family members in the company managerial team have higher odds of adopting a Controller or an Exploiter attitude than a Mixer or an Explorer approach. However, in line with H5, the comparison between Model 1 and Model 2 shows that characterizing FBs through a range of four parameters has a stronger explanatory power than a dichotomous approach. The Nagelkerke pseudo R^2 decreases from 0.260 to 0.222 between Model 1 and Model 2.

The examination of the coefficients displayed by the control variables shows that firm age has no significant effect, whereas industry matters. The coefficients of Supplier_dominated, Scale_intensive, and Specialized_supplier are all posi-

tive and significantly different from 0 at $p < .05$, $p < .01$, and $p < .10$, respectively (Model 1). Localization in an industrialized country is the most significant driver of an exploring attitude toward human resources abroad among the included FDI-specific controls (the coefficient of Industrialized_country is positive and significant at $p < .01$). In line with the past findings in the literature, the greater availability of qualified candidates and the higher costs of expatriates in developed countries encourage internationalized firms to explore the human capital provided by the host country (Gaur, Delios, and Singh 2007). Also, the negative coefficient of the Greenfield variable (significant at $p < .10$ in Model 1) confirms that internationalized firms have a stronger propensity to exploit internal

human resources when the foreign venture involves no acquisition of existing firms (Delios and Bjorkman 2000). In contrast, the ownership of a minority stake in a foreign venture and the nature of the FDI (either manufacturing or commercial activities) have no significant effect on the approach to human resources abroad.

Concluding Remarks

The empirical analysis provided in this paper offers two interesting results. First, not all the FD attributes examined exert the same impact on the propensity to explore qualified human resources in the host country of strategic overseas ventures. The share of equity directly controlled by family members and the participation of family members in the managerial team increases the propensity to control FDIs by means of direct visits and expatriations. In contrast, the share of family members on the board of directors has no significant impact and the participation of younger successors is positively associated with higher odds of recruiting qualified personnel in the host country. Second, because of the different degree of alignment with FB organizational attributes among sampled firms, a disaggregated analysis of the impact of multiple FB dimensions on the attitude toward human resources abroad has more explanatory power compared with the use of a synthetic dichotomous indicator.

The empirical findings mentioned earlier have significant consequences. Firms are increasingly aware that HRM practices abroad are becoming a critical source of competitive advantage in global as well as multi-domestic markets (Schuler, Budhwar, and Florkowski 2002). This general indication applies to both FBs and non-FBs. However, our results stress that the degree of alignment with specific dimensions of the FB model is important to the design of a coherent approach to HRM practices in foreign subsidiaries. If specific features of the FB model emphasize focus on internal staffing as a means of controlling operations abroad, the managers of internationalized FBs should be aware of the risk that the organizational culture of the parent company could become a barrier to the full exploitation of the opportunities provided by an FDI, including local human resources.

Our empirical results also reveal some interesting implications for the growing offer of private and public services in support of internationalization. Differentiated patterns of

growth in foreign markets imply diversified training needs, also in the case of FBs. Training programs in the field of internationalization should avoid a segmentation of potential candidates mainly based on size. Initiatives should be tailored to more specific features, including the ownership structure and the managerial model at the parent company.

Like all research papers, this study is not immune from limitations and future research could expand the present analysis in several directions. The findings of our study stress the need for additional theoretical and empirical research in the area of international HRM and FB, possibly addressing the impact of staffing and recruiting policies on the performance of overseas ventures. The replication of the proposed analysis in a wider set of parent companies located in different countries could account for cross-national differences in the attitude toward HRM abroad. The differentiated impact on international staffing observed for disaggregated FB organizational attributes suggests the opportunity to extend this line of analysis to additional key features of FBs such as organizational experience and culture.

References

- Abdellatif, M., B. Amann, and J. Jaussaud (2010). "Family Versus Nonfamily Business: A Comparison of International Strategies," *Journal of Family Business Strategy* 1(3), 108–116.
- Arbaugh, J. B., S. M. Camp, and L. W. Cox (2008). "Why Don't Entrepreneurial Firms Internationalize More?," *Journal of Managerial Issues* 20(3), 366–382.
- Armagan, S., and M. Portugal Ferreira (2005). "The Impact of Political Culture on Firms' Choice of Exploitation—Exploration Internationalization Strategy," *International Journal of Cross Cultural Management* 5(3), 275–291.
- Arregle, J. L., L. Naldi, M. Nordqvist, and M. Hitt (2012). "Internationalization of Family-Controlled Firms: A Study of the Effects of External Involvement in Governance," *Entrepreneurship Theory and Practice* 36(6), 1115–1143.
- Astrachan, J. H., and T. Kolenko (1994). "A Neglected Factor Explaining Family Business: Human Resource Practice," *Family Business Review* 7(3), 251–262.
- Astrachan, J. H., S. B. Klein, and K. S. Smyrniotis (2002). "The F-PEC Scale of Family Influence: A Proposal for Solving the Family

- Business Definition Problem," *Family Business Review* 15(1), 45–58.
- Basco, R., and M. J. Perez Rodriguez (2009). "Studying the Family Enterprise Holistically. Evidence for Integrated Family and Business Systems," *Family Business Review* 22(1), 82–95.
- (2011). "Ideal Types of Family Business Management: Horizontal Fit Between Family and Business Decisions and the Relationship with Family Business Performance," *Journal of Family Business Strategy* 2(3), 151–165.
- Beamish, P. W., and A. C. Inkpen (1998). "Japanese Firms and the Decline of the Japanese Expatriate," *Journal of World Business* 33(1), 35–50.
- Boeker, W., and R. Karichalil (2002). "Entrepreneurial Transitions: Factors Influencing Founder Departure," *Academy of Management Journal* 45(4), 818–826.
- Calabrò, A., D. Mussolino, and M. Huse (2009). "The Role of Board of Directors in the Internationalisation Process of Small and Medium Sized Family Businesses," *International Journal of Globalisation and Small Business* 3(4), 393–411.
- Camisón, C., and A. Villar-López (2010). "Effect of SMEs' International Experience on Foreign Intensity and Economic Performance: The Mediating Role of Internationally Exploitable Assets and Competitive Strategy," *Journal of Small Business Management* 48(2), 116–151.
- Carney, M. (2005). "Corporate Governance and Competitive Advantage in Family-Controlled Firms," *Entrepreneurship Theory and Practice* 29(3), 249–265.
- Cascino, S., A. Pugliese, D. Mussolino, and C. Sansone (2010). "The Influence of Family Ownership on the Quality of Accounting Information," *Family Business Review* 23(3), 246–265.
- Casillas, J. C., A. M. Moreno, and F. J. Acedo (2010). "Internationalization of Family Businesses: A Theoretical Model Base on International Entrepreneurship Perspective," *Global Management Journal* 3(2), 18–35.
- Cerrato, D., and M. Piva (2012). "The Internationalization of Small and Medium-Sized Enterprises: The Effect of Family Management, Human Capital and Foreign Ownership," *Journal of Management and Governance* 16(4), 617–644.
- Chua, J. H., J. J. Chrisman, and P. Sharma (1999). "Defining the Family Business by Behaviour," *Entrepreneurship Theory and Practice* 33(4), 19–39.
- Chua, J. H., J. J. Chrisman, L. P. Steier, and S. B. Rau (2012). "Sources of Heterogeneity in Family Firms: An Introduction," *Entrepreneurship Theory and Practice* 36(6), 1103–1113.
- Claessens, S., S. Djankov, J. P. Fan, and L. H. Lang (2002). "Disentangling the Incentive and Entrenchment Effects of Large Shareholdings," *The Journal of Finance* 57(6), 2741–2771.
- Claver, E., L. Rienda, and D. Quer (2009). "Family Firms' International Commitment the Influence of Family-Related Factors," *Family Business Review* 22(2), 125–135.
- Collings, D. G., H. Scullion, and M. J. Morley (2007). "Changing Patterns of Global Staffing in the Multinational Enterprise: Challenges to the Conventional Expatriate Assignment and Emerging Alternatives," *Journal of World Business* 42(2), 198–213.
- Crick, D., R. Bradshaw, and S. Chaudhry (2006). "Successful Internationalising UK Family and Non-Family-Owned Firms: A Comparative Study," *Journal of Small Business and Enterprise Development* 13(4), 498–512.
- Dabíc, M., M. Ortiz-De-Urbina-Criado, and A. M. Romero-Martínez (2011). "Human Resource Management in Entrepreneurial Firms: A Literature Review," *International Journal of Manpower* 32(1), 14–33.
- Dawson, A. (2011). "Private Equity Investment Decisions in Family Firms: The Role of Human Resources and Agency Costs," *Journal of Business Venturing* 26(2), 189–199.
- De Kok, J. M. P., L. M. Uhlaner, and A. R. Thurik (2006). "Professional HRM Practices in Family Owned-Managed Enterprises," *Journal of Small Business Management* 44(3), 441–460.
- Delios, A., and I. Bjorkman (2000). "Expatriate Staffing in Foreign Subsidiaries of Japanese Multinational Corporations in the PRC and the United States," *The International Journal of Human Resource Management* 11(2), 278–293.
- Di Toma, P., and S. Montanari (2010). "The Definitional Dilemma in Family Business Research: Outlines of an Ongoing Debate," *International Journal of Entrepreneurial Venturing* 2(3/4), 262–275.
- Dunning, J. H., and S. Lundan (2008). *Multinational Enterprise and the Global Economy*. Cheltenham, UK: Edward Elgar.

- Dyer, W. G. (2003). "The Family: The Missing Variable in Organizational Research," *Entrepreneurship theory and practice* 27(4), 401–416.
- Dynley, M. D., A. W. Pearson, and S. R. Sardeshmukh (2007). "The Negative Consequences of Pay Dispersion in Family and Non-family Top Management Teams: An Exploratory Analysis of New Venture, High-Growth Firms," *Journal of Business Research* 60(10), 1039–1047.
- Esperança, J. P., M. M. Hill, and A. C. Valente (2006). "Entry Mode and HRM Strategies of Emerging Multinationals: An Empirical Analysis of Portuguese Firms Entering the Spanish Market," *International Journal of Organizational Analysis* 14(4), 260–276.
- European Commission (2009). *Final Report of the Expert Group. Overview of Family Business Relevant Issues: Research, Networks, Policy Measures and Existing Studies*. Geneva: European Commission.
- Fama, E. F., and M. C. Jensen (1983). "Separation of Ownership and Control," *Journal of Law and Economics* 26(2), 301–325.
- Fernández, Z., and M. J. Nieto (2005). "Internationalization Strategy of Small and Medium-Sized Family Businesses: Some Influential Factors," *Family Business Review* 18(11), 77–89.
- (2006). "Impact of Ownership on the International Involvement of SMEs," *Journal of International Business Studies* 37(3), 340–351.
- Filatotchev, I., N. Isachenkova, and T. Mickiewicz (2007). "Corporate Governance, Managers' Independence, Exporting, and Performance of Firms in Transition Economies," *Emerging Markets Finance and Trade* 43(5), 62–77.
- Gallo, M. A., and C. G. Pont (1996). "Important Factors in Family Business Internationalization," *Family Business Review* 9(1), 45–59.
- Gallo, M. A., and J. Sveen (1991). "Internationalizing the Family Business: Facilitating and Restraining Factors," *Family Business Review* 4(2), 181–190.
- Gaur, A. S., A. Delios, and K. Singh (2007). "Institutional Environments, Staffing Strategies, and Subsidiary Performance," *Journal of Management* 33(4), 611–636.
- Gersick, K. E., J. A. Davis, M. M. Hampton, and I. Lansberg (1997). *Generation to Generation: Life Cycles of the Family Business*. Cambridge, MA: Harvard Business School Press.
- Graves, C., and J. Thomas (2006). "Internationalization of Australian Family Businesses: A Managerial Capabilities Perspective," *Family Business Review* 19(3), 207–224.
- (2008). "Determinants of the Internationalization Pathways of Family Firms: An Examination of Family Influence," *Family Business Review* 21(2), 151–167.
- Green, W. (1993). *Econometric Analysis*. New York: Macmillan.
- Jaskiewicz, P., V. M. González, S. Menéndez, and D. Schiereck (2005). "Long-Run IPO Performance Analysis of German and Spanish Family-Owned Businesses," *Family Business Review* 18(3), 179–202.
- Kets de Vries, M. F. (1996). *Family Business: Human Dilemmas in the Family Firm Text and Cases*. London: International Thomson Business Press.
- Klein, S. B., J. H. Astrachan, and K. X. Smyrniotis (2005). "The F-PEC Scale of Family Influence: Construction, Validation, and Further Implication for Theory," *Entrepreneurship: Theory and Practice* 29(3), 321–338.
- Konopaske, R., S. Werner, and K. E. Neupert (2002). "Entry Mode Strategy and Performance: The Role of FDI Staffing," *Journal of Business Research* 55(9), 759–770.
- Kontinen, T., and A. Ojala (2010). "The Internationalization of Family Businesses: A Review of Extant Research," *Journal of Family Business Strategy* 1(2), 97–107.
- Lavie, D., U. Stettner, and M. L. Tushman (2010). "Exploration and Exploitation Within and Across Organizations," *The Academy of Management Annals* 4(1), 109–155.
- Le Breton-Miller, I., and D. Miller (2009). "Agency vs. Stewardship in Public Family Firms: A Social Embeddedness Reconciliation," *Entrepreneurship: Theory and Practice* 33(6), 1169–1191.
- Lindow, C. M., S. Stubner, and T. Wulf (2010). "Strategic Fit Within Family Firms: The Role of Family Influence and the Effect on Performance," *Journal of Family Business Strategy* 1(3), 167–178.
- Litz, R. A. (2008). "Two Sides of a One-Sided Phenomenon: Conceptualizing the Family Business and Business Family as a Mobius Strip," *Family Business Review* 21(3), 217–236.
- Litz, R. A., A. W. Pearson, and S. Litchfield (2012). "Charting the Future of Family Business Research: Perspective From the Field," *Family Business Review* 25(1), 16–32.

- Lubatkin, M. H., W. S. Schulze, Y. Ling, and R. N. Dino (2005). "The Effects of Parental Altruism on the Governance of Family-managed Firms," *Journal of Organizational Behavior* 26(3), 313–330.
- McCullagh, P. (1980). "Regression Models for Ordinal Data," *Journal of the Royal Statistical Society* 42(2), 109–142.
- March, J. G. (1991). "Exploration and Exploitation in Organizational Learning," *Organization Science* 2(1), 1–87.
- Mariotti, S., and M. Mutinelli (Eds.) (2012). "Italia Multinazionale 2012," *Le Partecipazioni Italiane all'estero ed Estere in Italia*. Soveria Mannelli: Rubbettino.
- Minbaeva, D., T. Pedersen, I. Bjorkman, C. Fey, and H. Park (2003). "MNC Knowledge Transfer, Subsidiary Absorptive Capacity and Knowledge Transfer," *Journal of International Business Studies* 34, 530–549.
- Naldi, L., and M. Nordqvist (2009). "Family Firms Venturing into International Markets: A Resource Dependence Perspective," in *Frontiers of Entrepreneurship Research*. Wellesley. Boston: Babson College, 395–413.
- Norušis, M. J. (2006). *SPSS 14.0 Advanced Statistical Procedures Companion*. New York: Prentice Hall.
- Okoroafo, S. C. (1999). "Internationalization of Family Businesses: Evidence from Northwest Ohio, USA," *Family Business Review* 12(2), 147–158.
- Patel, P. C., and J. O. Fiet (2011). "Knowledge Combination and the Potential Advantages of Family Firms in Searching for Opportunities," *Entrepreneurship Theory and Practice* 35(6), 1179–1197.
- Patel, V. K., T. M. Pieper, and J. F. Hair, Jr. (2012). "The Global Family Business: Challenges and Drivers for Cross-Border Growth," *Business Horizons* 55(3), 231–239.
- Pavitt, K. (1984). "Sectoral Patterns of Technical Change: Towards a Taxonomy and a Theory," *Research Policy* 13(6), 343–373.
- Sardeshmukh, S. R., and A. C. Corbett (2011). "The Duality of Internal and External Development of Successors: Opportunity Recognition in Family Firms," *Family Business Review* 24(2), 111–125.
- Schuler, R. S., P. S. Budhwar, and G. W. Florkowski (2002). "International Human Re-Source Management: Review and Critique," *International Journal of Management Reviews* 4(1), 41–70.
- Sciascia, S., P. Mazzola, J. H. Astrachan, and T. M. Pieper (2013). "Family Involvement in the Board of Directors: Effects on Sales Internationalization," *Journal of Small Business Management* 51(1), 83–99.
- Scullion, H., D. G. Collings, and P. Gunnigle (2007). "International Human Resource Management in the 21st Century: Emerging Themes and Contemporary Debates," *Human Resource Management Journal* 17(4), 309–319.
- Sharma, P. (2004). "An Overview of Family Business Studies: Current Status and Direction for the Future," *Family Business Review* 17(1), 1–37.
- Sharma, P., and P. G. Irving (2005). "Four Bases of Family Business Successor Commitment: Antecedents and Consequences," *Entrepreneurship: Theory and Practice* 29(1), 13–33.
- Tan, D., and J. Mahoney (2003). "Explaining the Utilization of Managerial Expatriates from the Perspectives of Resource-Based, Agency, and Transaction Costs Theories," *Advances in International Management* 15, 179–205.
- Thomas, J., and C. R. Graves (2005). "Internationalising the Family Firm as a Demonstration of an Entrepreneurial Culture," *Journal of Small Business and Entrepreneurship* 17(2), 91–113.
- Tsang, E. W. K. (2002). "Learning from Overseas Venturing Experience: The Case of Chinese Family Businesses," *Journal of Business Venturing* 17(1), 21–40.
- Uhlaner, L. M., F. W. Kellermanns, K. A. Eddleston, and F. Hoy (2012). "The Entrepreneurial Family: A New Paradigm for Family Business Research," *Small Business Economics* 38(1), 1–11.
- Villalonga, B., and R. Amit (2006). "How Do Family Ownership, Control and Management Affect Firm Value?," *Journal of Financial Economics* 80, 385–417.
- (2010). "Family Control of Firms and Industries," *Financial Management* 39(3), 863–904.
- Yu, A., G. T. Lumpkin, R. L. Sorenson, and B. H. Brigham (2012). "The Landscape of Family Business Outcomes: A Summary and Numerical Taxonomy of Dependent Variables," *Family Business Review* 25(1), 33–57.
- Zahra, S. A. (2003). "International Expansion of U.S. Manufacturing Family Businesses: The Effect of Ownership and Involvement," *Journal of Business Venturing* 18(4), 495–512.

The Positive Effect of Motivation and International Orientation on SME Growth

by Øystein Moen, Alf Gunnar Heggeseth, and Ola Lome

This empirical study on small and medium-sized enterprise growth investigates the relationship between motivation for growth, international orientation, and subsequent performance by following 247 firms over 11 years. Using a combination of regression analysis and structural equation modeling, the authors find the international orientation of the firm to be a consistent predictor of growth in revenue and exports. The authors also find the international orientation of the firm to be closely interrelated with motivation for growth: Firms with managers and owners having a strong motivation for growth tend also to have managers with high international orientation and display superior growth both domestically and abroad. Whereas motivation seems independent of past performance, it has a profound positive influence on the growth in revenue. Moreover, the findings reveal that some firms are able to sustain high growth rates over an extended period of time. The study supports the contention that some firms are able to systematically outperform the rest.

Introduction

As pointed out by Wiklund and Shepherd (2003), few studies have empirically investigated the link between motivation for growth and subsequent growth in small and medium-sized enterprises (SMEs). This is surprising, as a ground premise for motivational theories within psychology is that our motivation affects our behavior and subsequently the level of effort (Kanfer 1990). Further, our assessment of the literature shows that few studies have investigated the effect of motivation on growth in revenue, employment, and exports separately. This distinction is of major interest for

both business leaders and public policy makers; whereas business leaders are mainly focused on growth in revenue, public policy makers are also concerned with growth in employment. For SMEs, international expansion is becoming a more and more viable growth alternative because of the revolution in communication, transportation, financing, and the homogenization of markets (Oviatt and McDougall 1994). Thus, from a research perspective, focus on internationalization and overall growth in SMEs seems more and more inseparable. Though previous literature has focused on international orientation and motivation independently, little consideration has

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been given to the shared impact of these on performance. A reason for this apparent dearth of research may be the temporal separation of motivation, international orientation, and subsequent performance, making data collection an extensive and time-consuming task.

Motivational studies have frequently been criticized for the use of bivariate analysis, which does not consider the moderating effect of other variables (Wiklund and Shepherd 2003). Both Baum and Locke (2004) and Shane, Locke, and Collins (2003) argue that motivational traits may affect actions indirectly through other mechanisms. Similar methodological concerns are also found in the export performance literature, and Zou and Stan (1998, p. 341) claimed that "To develop better theory in export performance research, researchers need to combine regression analysis with more sophisticated approaches such as path analysis and structural equation modeling (SEM) so that both direct and indirect effects can be investigated." In addition to the use of methodologically more sophisticated analysis, McDougall and Oviatt (1996) call for more longitudinal studies in the field of internationalization. In analyzing growth, this is of particular importance as growth in itself is a change process that cannot be properly evaluated by only considering a single point in time.

We seek to address the above-mentioned gaps and methodological considerations with a longitudinal study of 247 Norwegian exporting SMEs. As such, the contribution of this paper is threefold: First of all, we investigate the connection between motivation for growth and the subsequent growth in revenue, employment, and exports. Second, we tie this together with the international orientation of the firm and see the comparative influence on the same factors. Third, we seek to understand the influence of past performance on future growth and motivation. Though these constructs have been analyzed separately in past literature, research into their connection and comparative importance on performance is nonexistent. Longitudinally, exploring these constructs and their interrelation in an SME context is important, as SMEs account for over 95 percent of businesses and generate between 60 and 90 percent of new jobs (OECD 1997). A better understanding of the determinants of growth should therefore be of vital interest to both business practitioners and public policy makers.

This paper proceeds along the following lines: First, we review relevant literature and develop a set of hypotheses regarding the relationships between our study constructs. We then present our results before discussing these in connection with relevant theory. The paper concludes with practical implications for business practitioners and public policy makers as well as suggestions for future research.

Theoretical Background and Development of Hypotheses **Growth Motivation and Subsequent Firm Growth**

A ground premise for motivational theories is that our motivation affects our behavior, and subsequently the level of effort (Kanfer 1990). The theory of planned behavior incorporates this and predicts that as a general rule, the stronger the intention to engage in a behavior, the more likely should be its performance (Ajzen 1991). Transposing this to a firm setting, we would expect a strong growth motivation among managers and owners to have a positive influence on subsequent firm growth. However, as pointed out by Wiklund and Shepherd (2003), the temporal separation of motivation and subsequent growth has resulted in relatively few empirical studies investigating this link. Nevertheless, of the limited studies, several have been conducted in a Scandinavian context. Kolvereid and Bullvåg (1996) looked at 173 Norwegian new businesses and found the entrepreneur's growth intention to be significantly associated with subsequent growth. In an empirical investigation of 863 Swedish small firms, Delmar and Wiklund (2008) found a positive relationship between growth motivation and growth. However, the authors argued that the relationship is weakened for two reasons: First, the environment and the organization put constraints on the managers, limiting their volitional control and ability to perform the desired tasks. Second, the fuzzy and complex nature of firm expansion may create conflicts with other goals and limit the manager's ability to develop suitable strategies. A similar argument is found in Davidsson, Achtenhagen, and Naldi (2006) who point out that because the environment varies across dimensions such as dynamism, heterogeneity, and munificence, as described by Dess and Beard (1984), external factors rather than management motivation may largely determine how much firms grow. Though all these factors

can be expected to reduce the strength of the relationship, most empirical studies still indicate a positive link (Baum, Locke, and Kirkpatrick 1998; Baum, Locke, and Smith 2001; Wiklund and Shepherd 2003)

Among the previously mentioned studies, there are considerable differences in how motivation is defined and operationalized. Whereas Wiklund and Shepherd (2003) define a motivational factor based on the desirability of growth, Baum, Locke, and Smith (2001) and Baum, Locke, and Kirkpatrick (1998) see motivation as a composition of vision, self-efficacy, and goal. However, none of these studies incorporate the growth motivation of owners. Their inclusion is of particular importance in an SME setting as owners to a larger degree may be involved in the daily running of the firm. Additionally, previous studies have failed to incorporate the fact that growth motivation might be survival oriented, as pointed out by Carsrud and Brännback (2011). This means that management sometimes considers growth as a necessity for firm survival, rather than a goal in itself. Incorporating these considerations, this study see motivation for growth as a group level construct that involves the shared ambition of managers and owners, while taking both expansion and survival-oriented aspects into account. Even though the measures of motivation have differed, both the psychology literature and empirical findings suggest a positive link between motivation and subsequent firm growth. We therefore propose the following hypothesis.

H1: The growth motivation of managers and owners positively affects the subsequent revenue growth of the firm.

Based on the same argumentation, we would expect the same to be true for growth in employment, and propose the following hypothesis.

H2: The growth motivation of managers and owners positively affects the subsequent employment growth of the firm.

The increasing globalization of markets has accentuated the importance of international activities for overall firm performance. Maturing domestic markets, increased competition at home, and limited domestic opportunities increasingly force firms with an ambition for

growth to look toward international markets. As pointed out by Oviatt and McDougall (1994), the opportunity to compete on a global stage is no longer reserved to large multinational corporations (MNCs) because of the revolution in communication, transportation, financing, and the homogenization of markets. Thus, from a research perspective, focus on internationalization and overall growth in SMEs seems more and more inseparable. We therefore want to investigate the connection between the motivation for firm growth and sales generated from international activities. In a sample of firms from Poland, Cieslik, Kaciak, and Welsh (2012) presented results that indicate that concentration of export sales in one market reduced the export growth rates, whereas Zahra, Ireland, and Hitt (2000) present factors that may explain a direct positive relationship between international diversification and export performance. It is reasonable to assume that when managers have high growth ambitions, they will follow an export strategy not limiting the expansion to one or few markets; hence, we propose the following hypothesis.

H3: The growth motivation of managers and owners positively affects the firm's subsequent growth in export sales.

International Orientation, Motivation, and Export Performance

Exporting SMEs are by no means a homogenous group (Nummela, Puumalainen, and Saarenketo 2005). Whereas some firms primarily have a domestic scope with exports as a secondary focus, others operate mainly abroad and have a high international orientation. We define a high international orientation as firms that actively seek international opportunities, see the world as their market, adapt their products to international operations, communicate their international ambitions throughout the organization, and develop the resources required for international activities. According to Knight (2001), the international entrepreneurial orientation of SMEs strongly contributes to their international performance, and is one of the most important success factors of international ventures. In a review of the determinants for export performance, Zou and Stan (1998) found the international orientation of the firm to be a consistent predictor of export performance. They concluded by stating that an internationally oriented firm better identifies

and benefits from emerging international opportunities. Consequently, it can be expected that a high international orientation positively influences the firm's export sales.

H4: Firms with a high international orientation display higher growth in export sales.

As pointed out by Lu and Beamish (2001), growth through international diversification is an important strategic option for small firms as it broadens the customer base and enables the firm to achieve economies of scope and scale. Further, they note that the difference in market conditions across countries allows internationalized firms to capitalize on market imperfections and achieve higher returns on their resources. This would imply that a high international orientation would lead to increased overall performance. However, international activities also increase the environmental complexity faced by managers of SMEs and hence set additional challenges for the firm and introduce more risk (Reuber and Fischer 2002). The resource demand of internationalization may put additional strain on the domestic activities of the business and can have adverse effects on the total growth of the firm even though sales from international activities are increasing. This is noted by McDougall and Oviatt (1996) who point out that empirical findings on the benefits of internationalization are mixed and claim that foreign expansion does not necessarily contribute positively to overall company growth. Similarly, in a large study on SME growth, Westhead, Wright, and Ucbasaran (2001) found the propensity of exporting not to be significantly related to employment growth, sales growth, or even firm survival. This underlines the importance of considering growth in foreign sales in conjunction with total growth and firm survival. Despite the possible challenges connected to international activities, we still expect an international orientation to have a positive influence on overall firm growth in the long run and propose the following hypothesis.

H5: Firms with a high international orientation display higher growth in total revenue.

As noted earlier, it is reasonable to expect that firms with managers or owners with a strong motivation for growth want to obtain some of this in export markets. Similarly, it is

likely that firms who have a strong international orientation also exhibit a desire for overall growth. We therefore expect a connection between the international orientation of the firm and motivation for growth, and propose the following hypothesis.

H6: Firms with managers or owners with a strong motivation for growth also exhibit a higher international orientation.

Past Growth and the Effect on Future Growth and Motivation

A firm accumulates resources when it grows. In principle, this increases the number of potential resource combinations (Lockett et al. 2011). As the system accumulates varied resources, the number of possible combinations will expand naturally at a combinatorial rate (Weitzman 1996). From a resource-based view (Barney 1991, 2001; Wernerfelt 1984), it is therefore reasonable to expect that firms who have grown and acquired resources in the past will continue to grow at an accelerating pace. However, as pointed out by Penrose (1959), the rate at which the firm can develop its managerial capabilities sets an ultimate limit to its growth. This is further elaborated by Dierickx and Cool (1989) who claim that the quicker a firm tries to grow, the more costly and less effective growth becomes. They argue that this is due to the time compression diseconomies, which build on strictly convex adjustment costs. Moran and Ghoshal (1999) consider it from a slightly different perspective and argue that even though growth provides the firm with an increasing number of opportunities over time, the managers are not able or willing to access, deploy, and combine them. This is echoed by Vermeulen and Barkema (2001) who claim that organic growth leads to the repeated exploitation of existing resources, leading firms to be simple and inert. Thus, from a theoretical view point, past growth could have both positive and negative influences on subsequent growth rates.

Considering the empirical evidence, Baum and Locke (2004) found a significant positive correlation between past and subsequent venture growth in a study of 229 North American architectural woodworking firms. However, in a related study, Baum, Locke, and Kirkpatrick (1998) found no significant correlation. Decomposing growth into organic and acquisitional, Lockett et al. (2011) found a direct and negative

relationship between previous and current organic growth in a longitudinal study of 11,525 Swedish manufacturing firms. They concluded by supporting Penrose, claiming that firms that have expanded organically in the past will find it more difficult to expand organically in the current period. However, they also found that previous acquisitional growth could have a positive impact on future organic growth. Thus, empirical evidence seems contradictory. To investigate the relationship between past and current growth, we propose the following hypothesis.

H7: Above average growth in the past will lead to below average growth in the future.

Previous growth may also have an influence on the motivation for further growth. Wiklund and Shepherd (2003) point out that it appears plausible that the experience of realized growth could affect future firm growth aspirations. In the psychology literature, Bagozzi and Kimmel (1995) noted that the connection between past performance and future motivation is positive and reinforcing on the personal level. They claimed that motivational theories often fail to take this into account even though it has profound effects. Assuming that this also holds for firm managers and owners, we would expect a positive reinforcement of motivation for firms that in the past have experienced substantial growth. However, simply aggregating these results to a firm environment may not be entirely valid. These studies are limited to personal motivation and the external validity does not necessarily hold for firm growth as managers' motivation is affected by a variety of internal and external factors.

Another possible factor affecting the motivation for future growth is that growth adds complexity, which can be difficult to manage (Covin and Slevin 1997). This was noted by Penrose (1959) who claimed that the development of managerial resources takes time and sets a limit to how fast firms can grow. Thus, it seems plausible that periods of high past growth can lead to a lower motivation for growth in order to enable the organization to catch up.

Regarding the empirical evidence, few studies have investigated the effect of past growth on the motivation for future growth in SMEs. One notable exception is a study by

Delmar and Wiklund (2008), which found that past growth positively affects growth motivation, proposing the existence of "feedback-loops." This may be seen in conjunction with Wiklund and Shepherd's (2003) suggestion of growth motivation as an "acquired taste," meaning that managers who have experienced considerable growth may have seen the benefits of expansion and have higher motivation for future growth. These findings support the notion of past performance as a positive and reinforcing influence on motivation, as noted in the psychology literature. We therefore propose the following hypothesis.

H8: Past growth positively affects the motivation for growth for managers and owners.

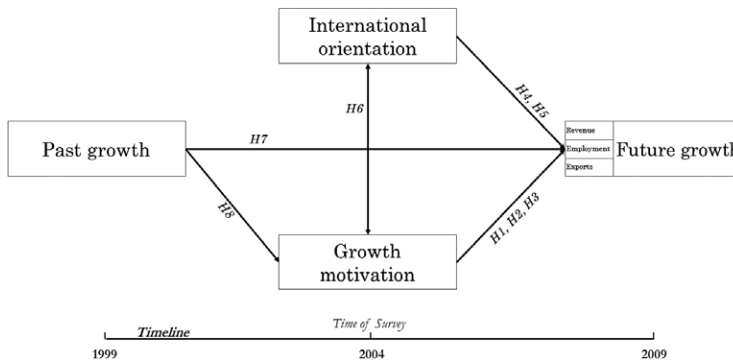
Hypothesis Relationships

Throughout this section, we have developed eight hypotheses. Figure 1 shows the hypothesized relationships among the study constructs. Though all of these have been analyzed separately in the past, they have not been seen directly in conjunction with each other as our model enables us to do. Among the eight proposed hypotheses, two hypotheses regard past growth and its effect on motivation and future growth. One hypothesis describes the relationship between international orientation and growth motivation, whereas five hypotheses regard the connection between international orientation, growth motivation, and growth in revenue, employment, and exports.

Methodology

The hypothesized relationships were investigated in a quantitative manner by using time series data for Norwegian SMEs covering the period 1999–2009. The data were centered on a survey distributed to managers in 2004, enabling us to see motivational variables in conjunction with financial performance data, both preceding and anteceding the survey. As a result, cause and effect chains between a firm's past, its current situation, and its future performance can be investigated. In analyzing the data, we followed the recommendations of Zou and Stan (1998) and applied both regression analysis and SEM to understand both direct and moderating effects. As SEM assumes linearity, combining it with regression analysis enables us to investigate possible nonlinear relationships.

Figure 1
Hypothesized Relationships among Study Constructs



The Data Set

The recipients of the survey were senior managers of Norwegian small and medium-sized exporting manufacturers. The firms were identified from the Kompass Norway database, a commercial address list supplier. We adopted the classification of manufacturers from the Statistics Norway definition including in example textiles, wood, chemicals, metals, computer equipment, furniture, and machinery companies. We did one adjustment from the standard Statistics Norway definition of manufacturing industries, one group within food products was excluded: firms selling fish/fish farming-related products. The reason for this was the observation that some of these firms basically were distribution organizations. Following in example Morgan-Thomas and Jones (2009), we used the standard European Union definition of a small and medium-sized firm as having less than 250 employees. Most of the questions in the survey were based on a seven-point Likert scale and developed from internationally published scales. In total, 2,415 questionnaires were distributed, out of which 205 were returned because of address error. Of the remaining 2,210, 308 surveys were returned, yielding a response rate of 13.94 percent. In 2011, accounting and employment figures were retrieved from Statistics Norway, covering the period from 1999 to 2009. To ensure validity, the data were manually inspected. Some firms had merged in the period, and these were deleted. The same was also done with firms where the financial figures could not be verified against publicly available

sources. We then checked if the removed firms (because of mergers or invalid public data) were different than the rest of the sample using a t-test of the year of establishment, mean firm revenue in 2004, mean number of employees in 2004, and growth rate from 2004 to 2009. No significant differences between the two groups were found. We therefore conclude that among these variables, the removed firms do not differ in a systematic manner from the rest. The existence of outliers may have a large influence on regression coefficients and significance levels. In order to control for the impact of this, an outlier detection test in SPSS (SPSS, Inc., Chicago, IL, USA) was used for the relative growth in revenue, employment, and exports. The limit was set at 1.5 interquartile range, as described by Kinnear and Gray (2009). This revealed the existence of 17 outliers in the relative growth rates in exports, constituting 95 percent of the variance. A closer inspection of these cases revealed that all had a relatively moderate absolute growth in exports, but because of their very low initial exports, they exhibited an extreme relative growth rate. Thus, firms who had barely increased their exports in absolute terms had a large impact on the mean and variance of the sample. When these growth rates were removed, the standard deviation of export growth was reduced from 1,463.75 percent to 79.01 percent. The removal also reduced the skewness in the sample bringing the mean closer to the median. In total, this left 247 valid responses used in the analysis.

The characteristics of the remaining firms are presented in Table 1. As the table shows,

Table 1
Descriptive Statistics of Firms in the Sample

Factor	Mean	Median	Max	Min	Standard Deviation
Year of Establishment	1968.74	1980	2004	1853	28.00
Revenue (2004) ^a	85.78	35.97	1309.83	0.71	144.61
Employment (2004)	50.78	28.00	351.00	1.00	60.30
Exports (2004) ^a	33.24	7.39	668.16	0.01	71.84
Export Share of Revenue (2004) (Percent)	31.27	22.90	98.00	0.10	29.23
Growth Revenue (2004–2009) (Percent)	44.69	20.07	971.62	–91.64	117.85
Growth Employment (2004–2009) (Percent)	7.51	0.00	269.57	–91.30	53.37
Growth Export (2004–2009) (Percent)	3.00	–12.06	221.80	–99.49	78.71

^aAll currency quoted in million Norwegian krone (MNOK).

the sample has a distribution of both new and old firms, with a skewness toward newer firms. The export figures show considerable variations in the degree of internationalization, with the export share ranging from marginally above 0 percent to 98 percent, with a mean of 31 percent.

Motivational and Growth Measures

To ensure reliable measures for motivation for growth and international orientation, two new constructs were created using factor analysis. A large sample is needed when conducting factor analysis, and according to Comrey and Lee (1992), 200 cases is fair and 300 is good. Our sample of 247 firms is thus deemed satisfactory. Extraction of the factors was performed using principal component analysis with varimax as the rotating method. To assess the reliability of the combined factor, we used Cronbach's alpha. A high Cronbach's alpha indicates reliability and the existence of a strong internal consistency within the questions (Zinbarg et al. 2005). The motivation for growth variable was constructed using three questions related to the growth desire of managers and owners, as seen in Table 2. The international orientation of the firm variable was constructed from five questions relating to the firm's focus on international activities. The items were selected based on previous studies by Khandwalla (1977), Moen (2002), Moen and Servais (2002), and Knight and Cavusgil (2005). Both factors had a Cronbach's alpha exceeding the limit of 0.700 suggested by Nunnally

(1978). In some cases, motivation and international orientation were divided into three categories: "weak," "moderate," and "strong." This was done to increase the number of elements in each subset, and thus enabled more reliable statistical analysis. From the seven-point Likert scale, the strong category was classified as all firms with a motivation for growth or international orientation above 5.5. The lower limit was set at 2.5. It will be explicitly stated when this grouping is used.

In growth studies, an important decision to be made is the choice of growth indicator. In his review of 55 empirical growth studies, Delmar (1997) found that the most used indicators were growth in employment and sales revenue. These are easily available and may be seen as noncontroversial from a research perspective. Sales are the most general indicator and are especially useful in cross-industrial studies. They are also the indicator that small firm owners and managers use themselves (Barkham et al. 1996). As pointed out by Delmar (1997), sales are a precursor of other growth indicators. Though growth in employment is rarely seen as a goal in itself by management (Robson and Bennet 2000, p. 194), it might be the main point of interest for public policy makers. However, employment is not always highly correlated with sales growth as some of the growth in sales can be achieved through partnering and outsourcing. As revenue and employment clearly highlight different aspects of growth, we choose to use both indicators separately.

Table 2
Factor Analysis

Motivation for Growth*	Load	Cronbach's alpha
Growth Is a Strong Desire for the Firm's Management	0.943	
Growth Is a Strong Desire for the Firm's Owners	0.927	
Growth Is a Necessity for the Firm's Survival	0.792	
		0.861
<hr/>		
International Orientation*		
The Firm See the World, Not Just Norway, as Its Market	0.784	
The Firm's Culture Is Characterized by Actively Seeking Possibilities in Export Markets	0.887	
The Firm Is Able to Develop and Adjust New and Existing Products and Services to International Markets	0.830	
The Importance of Succeeding in Exports Is Emphasized Toward All Employees	0.885	
Developing Human and Other Resources That Contribute to Successful Export Is Emphasized	0.863	
		0.903

Growth can be measured both in absolute and relative terms. As Davidsson, Achtenhagen, and Naldi (2006, p. 367) state, "Relative (percentage) measures tend to 'favor' small firm growth while the reverse is true for absolute growth measures." In the case of our data set, the firm size varies considerably, demonstrated by the fact that the largest company in 2004 had the same revenue as the 104 smallest combined. Because of this, we will use relative growth as our main indicator, but complement this with absolute growth to get the full picture. One additional argument for including different growth measures is possible differences between firms within different industries influencing sales versus employment growth patterns.

Results

Growth Motivation and Subsequent Firm Growth

H1 suggests a positive connection between motivation for growth and subsequent revenue growth. To investigate this, the Pearson correlation between motivation for growth and revenue growth in the period 2004–2009 was

calculated. This revealed a positive significant relationship ($r(220) = 0.205, p < .002$), as seen in Table 3.

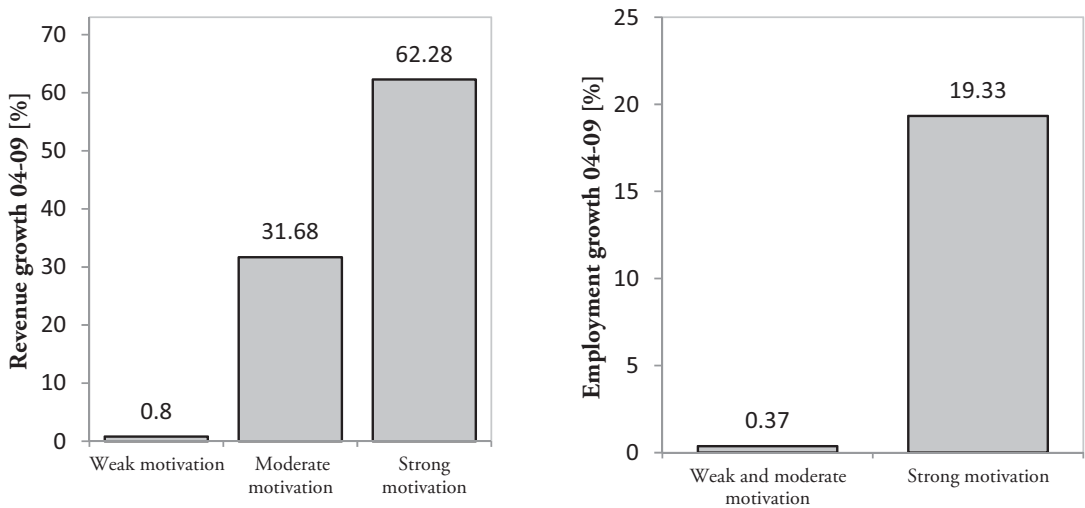
However, performing the same calculations using absolute growth yielded no significant connection. To further explore the relationship, we divided the firms into three groups, "weak," "moderate," and "strong motivation," as described in the Methodology section. Figure 2 displays the growth rate in the different motivational groups. An independent sample t-test yielded a significant difference in mean growth of 61.48 percent ($p < .036$) between the "weak" and "strong motivation" categories. The same was true for absolute growth (difference: 42.94 MNOK, $p < .001$). Investigating the difference between the "moderate" and "high motivation" category, a Welch's had to be used because of homoscedasticity. This yielded a significant difference of 30.60 percent ($p < .045$). In sum, the significant positive correlation and the fact that the firms in the "strong motivation" group performed significantly better than the rest indicate the existence of a connection between motivation and subsequent growth. Thus, H1 is supported: A strong motivation for growth

Table 3
Pearson Correlations between Study Constructs

Factors		Relative Growth		Absolute Growth	
		Correlation	<i>p</i> <	Correlation	<i>p</i> <
Growth Motivation	Revenue growth	0.205	.002*	0.111	.100
Growth Motivation	Employment growth	0.113	.144	-0.025	.744
Growth Motivation	Export growth	0.128	.105	0.143	.056
International Orientation	Revenue growth	0.227	.001*	0.275	.000*
International Orientation	Export growth	0.183	.019*	0.234	.001*
International Orientation	Export share growth	0.045	.587		
International Orientation	Growth motivation	0.389	.000*		
Past Revenue Growth (1999–2003)	Revenue growth (2004–2009)	0.163	.059	0.552	.000*

*Significant relationship at the 0.05 level.

Figure 2
Growth in Revenue (Left) and Employment (Right, Binned) in Each Growth Motivational Group



positively affects the subsequent revenue growth of the firm.

Next, to investigate the hypothesized positive relationship between motivation for growth and subsequent growth in employment, we applied a similar approach as for revenue growth. The Pearson correlation showed a positive but nonsignificant relationship

($r(168) = 0.113, p < .144$) as seen in Table 3. We then divided the firms in three motivational groups. However, because of the low number of firms in the “weak motivation” category ($n = 9$), we combined it with the “moderate” category, as seen in Figure 2. The two categories had almost identical mean growth in employment prior to combination (-1.42

percent and 0.54 percent). A Welch's test yielded no significant difference in growth rates between the firms in the "strong motivation" category and the rest (difference 18.95 percent, $p < .061$). However, it should be noted that the significance level was fairly close to our 5 percent rejection limit. As none of the results were significant, it would appear that H2 should be rejected. It is worth noticing that even though no significant connection was found, all the tests pointed toward a weak positive relationship. Because of these ambiguous results, we are neither able to reject nor support H2.

H3 proposes that the growth motivation of managers and owners positively affects the subsequent growth in export sales. The Pearson correlation between the two was 0.128 ($n = 163$, $p < .105$), as seen in Table 3. As in the previous tests, we binned the firms into three motivational groups. Because of the low number of firms in the "low motivation" category ($n = 8$), we combined this with the "moderate motivation" category. An independent sample t-test yielded no significant difference in growth rates between the two groups (difference 14.27 percent, $p < .249$). As no significant correlation or difference was found, we reject H3: The growth motivation of managers and owners does not contribute positively to subsequent export growth.

International Orientation, Motivation, and Export Performance

H4 suggests a positive relationship between international orientation and growth in export sales. As seen in Table 3, international orientation is significantly correlated to export growth, both in relative ($r(164) = 0.183$, $p < .019$) and absolute terms ($r(181) = 0.234$, $p < .001$). To further confirm this relationship, we divided the firms into three categories based on their international orientation, as outlined in the Methodology section. As the "weak international orientation" category only consisted of five firms, we combined the "weak" and "moderate" ($n = 97$) categories into one. An independent sample t-test revealed a significant difference in means between the "high international orientation" category and the rest (difference 35.33 percent, $p < .005$). Companies with a "high international orientation" experienced on average a 25.14 percent growth in exports, whereas the companies with a weak or moderate international orientation had -10.20

percent. Thus, H4 is supported: Firms with a high international orientation display higher export growth.

H5 postulates that firms with a high international orientation display higher growth in total revenue. The Pearson correlation was significant both in relative ($r(219) = 0.227$, $p < .001$) and absolute terms ($r(219) = 0.275$, $p < .000$). We then used the same grouping and combined the "weak" and "moderate international orientation" categories. The results showed a significant mean difference, with firms with a high international orientation experiencing a 33.52 percent ($p < .015$) higher growth than the rest. In absolute terms, companies with a high international orientation displayed on average 74.61 MNOK ($p < .001$) higher growth. Thus, H5 is supported: Firms with a high international orientation display higher revenue growth.

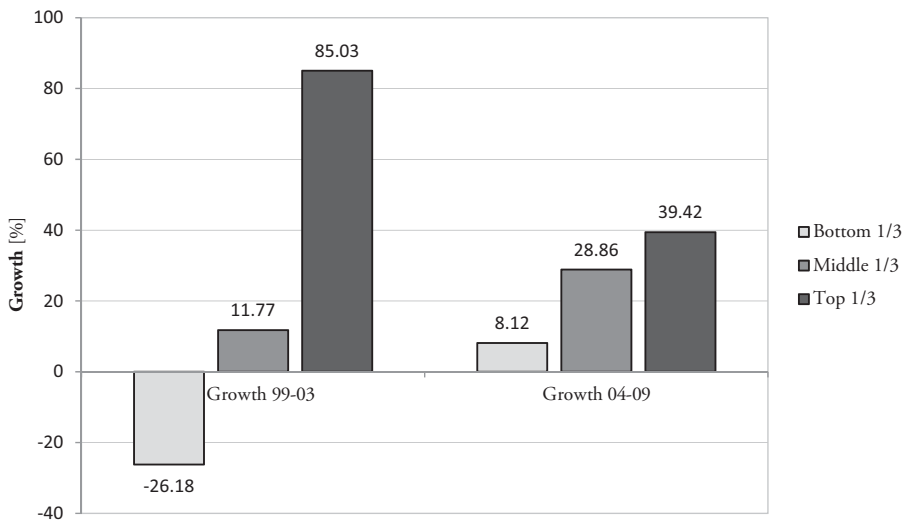
H6 suggests a positive relationship between motivation for growth and international orientation. As seen in Table 3, the correlation was 0.389 ($p < .000$), and this represents the strongest relationship between our study constructs. As a result, H6 is supported: Firms with a strong motivation for growth also exhibit a high international orientation.

To strengthen our analysis, we further investigated the relationship between international orientation and the growth in export share. On average, across all firms, the mean export share declined from 33.05 percent in 2004 to 27.77 percent in 2009. There was no significant correlation between change in export share and international orientation ($r(147) = 0.045$, $p < .587$). Testing the difference in change in export share between those with a high international orientation and the rest yielded no significant difference (mean difference 10.36 percent $p < .271$). Finally, growth in export share had an almost significant negative correlation with revenue growth ($r(149) = -0.138$, $p < .094$). The implications of these findings will be elaborated in the Discussion section.

Past Growth and the Effect on Future Growth and Motivation

To investigate H7 regarding the effect of past growth on future growth, the data set was divided into two periods: before the survey (1999–2003) and after the survey (2004–2009). Testing the correlation between growth in the first and second period yielded a positive but nonsignificant relationship ($r(135) = 0.163$, $p < .059$). Although this is not significant, it is

Figure 3
Growth for Each Performance Group



fairly close to our 5 percent rejection limit. This indicates the existence of a connection, implying that firms who grew in the first period were the same who grew in the second. As the correlation gave us an indication but yielded no conclusive proof, we proceeded by dividing the firms into three equally sized groups based on their growth from 1999 to 2003. This grouping and the corresponding growth in each period can be seen in Figure 3. As firm growth rates may vary with age (Sousa, Martínez-López, and Coelho 1998), we used analysis of variance to test whether there was a difference in age between the groups. Although the top third was slightly newer, the difference was not significant ($p < .221$).

From Figure 3, it is clear that the top performers in the first period also had the highest growth in the second. Examining this using a t-test revealed that the top third had a significantly higher growth in the second period as well (difference = 31.30 percent, $p < .049$). It should be noted that the top performers did not outperform the rest to the same extent as in the first period. Further, whereas both the bottom and middle groups had a higher growth rate in the second period, the top third was the only group where growth rates decreased. However, in sum, it is clear that the top performers from the first period also had the highest growth rates in the second, and thus we reject H7:

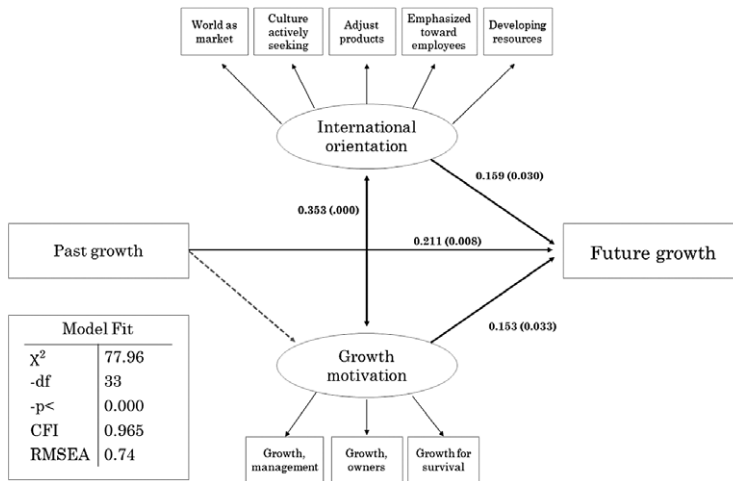
Above average growth in the past will not lead to below average growth in the future.

H8 suggests that past growth positively affects the motivation for future growth. To investigate this, we calculated the Pearson correlation between past growth in the period 1999–2003 and the motivation for growth at the time of survey in 2004, as seen in Table 3. The correlation between these indicates no significant connection ($r(140) = -0.011$, $p < .893$), implying that motivation is independent from past growth. To verify these findings, we wanted to test whether there was a difference between the extreme cases. Two groups were therefore created: those with more than 50 percent growth and those with less than 0 percent growth in the period 1999–2003. An independent sample t-test revealed no significant difference in motivation between these two groups (mean difference 0.12, $NGrowth > 50$ percent = 55, $NGrowth < 0$ percent = 31, $p < .739$). Given that there was no correlation between the two and no difference between the extremes, H8 is rejected: Past growth does not seem to affect subsequent motivation.

SEM

To better understand the interaction between past growth, international orientation, motivation for growth, and subsequent growth, an SEM was developed using AMOS 20 (Amos Develop-

Figure 4
Structural Equation Model



CFI, comparative fit index; *df*, degrees of freedom; RMSEA, root mean square error of approximation.

ment Corporation, Meadville, PA, USA). In doing so, we follow the recommendation of Zou and Stan (1998) to use a combination of regression analysis and SEM to reap the benefits of both approaches. Our model was estimated by applying maximum likelihood. The model fit was evaluated using Bentler's comparative fit index (CFI), root mean square error of approximation (RMSEA), and χ^2 . According to Hu and Bentler (1999), a CFI above 0.95 indicates a relatively good fit between the hypothesized model and the observed data. Regarding RMSEA, Byrne (1998, p. 112) states that "... values less than 0.05 indicate good fit, and values as high as 0.08 represent reasonable error of approximation in the population." In this model, χ^2 equals 77.96 ($df = 33$, $p < .000$), CFI = 0.965, and RMSEA = 0.074. We can therefore conclude that the model is a reasonable representation of the data.

The resulting model can be found in Figure 4, which also reports the corresponding standardized regression weights and significance levels. Firm size and age were included in the original model, but as the impact was not significant, they were dropped. From the model, it is evident that both motivation and the international orientation of the firm affect its subsequent performance. This strengthens

H1 and H5 regarding the influence of motivation and international orientation on subsequent growth. It is also clear that international orientation and motivation are interrelated, as seen by the strong standardized regression weight (0.353, $p < .000$), supporting H6. Further, their comparative influence on future growth is nearly equivalent. Past growth positively influenced future growth, but was unrelated to international orientation and motivation. This strengthens the rejection of both H7 and H8. Table 4 summarizes the results of each individual hypothesis.

Discussion

Growth Motivation, International Orientation, and Subsequent Performance

In this study, we have unified several constructs related to growth motivation, international orientation, and actual growth to better understand the determinants of SME performance. Our most significant finding is that firms where managers and owners have a strong motivation for growth tend to have a high international orientation and display superior growth both domestically and abroad. We build this conclusion on three key findings.

Table 4
Summary of Results

Hypothesis	Status
1 The growth motivation of managers and owners positively affects the subsequent revenue growth of the firm.	Supported
2 The growth motivation of managers and owners positively affects the subsequent employment growth of the firm.	Inconclusive
3 The growth motivation of managers and owners positively affects the firm's subsequent growth in export sales.	Rejected
4 Firms where managers have a high international orientation display higher growth in export sales.	Supported
5 Firms where managers have a high international orientation display higher growth in total revenue.	Supported
6 Managers/owners with a strong motivation for growth also exhibit a higher international orientation.	Supported
7 Above average growth in the past will lead to below average growth in the future.	Rejected
8 Past growth positively affects the motivation for growth for managers and owners.	Rejected

First, our results revealed a positive and significant relationship between growth motivation and the subsequent growth in revenue. This is concurrent with previous empirical findings by Wiklund and Shepherd (2003), who revealed a positive connection between motivation and subsequent revenue growth. However, we found no significant relationship between motivation for growth and subsequent growth in employment. Although all results pointed in the same direction, and several were close to the 5 percent rejection limit, none were significant. This meant we were not able to conclude whether motivation for growth had an influence on employment growth. Comparing our results with the findings of Delmar and Wiklund (2008), they found only partial support in examining the relationship between motivation and growth in sales, but full support when considering employment. Although their results differ from ours when it comes to the comparative strength of the relationship, both studies agree to motivation having an effect on growth.

Second, the results revealed a positive connection between international orientation and growth in both revenue and exports. Considering these findings in relation to previous empirical studies, the positive influence of an international orientation on subsequent export growth is congruent with Zou and Stan (1998),

who in a thorough review of the export performance literature found the international orientation of the firm to be a consistent predictor of export performance. Cieslik, Kaciak, and Welsh (2012) showed that a single export market strategy was related to reduced export growth rates. It seems reasonable to expect that firms with managers having a strong international orientation will target more export, and this may contribute to improved performance. This is also consistent with the conclusions of Aaby and Slater (1989), and Chetty and Hamilton (1993) that factors related to management's attitudes and perceptions are potent determinants of export performance. Cavusgil and Zou (1994) pointed out that high management commitment allows the firm to aggressively go after opportunities in export markets. Similar conclusions have also been reached by Leonidou, Katsikeas, and Piercy (1998), and Knight (2001), who found that an international entrepreneurial orientation in SMEs strongly contributes to the export performance of the firm. The positive connection between the international orientation of the firm and revenue growth shows that even though international activities may be resource demanding and put additional strain on the domestic activities, a high international orientation is positive for overall firm growth. This seems to contradict the findings of

Westhead, Wright, and Ucbasaran (2001), who in an empirical study of SME growth, found the propensity of exporting to be unrelated to sales growth. However, it should be noted that their sample size was very low, consisting of 116 firms, of which only 30 were exporters. Our results show that firms who actively seek international opportunities, see the world as their market, adapt their products to international operations, communicate their international ambitions throughout the organization, and develop the resources required for international activities experience higher overall firm growth than firms with a low international orientation.

Third, our results revealed a strong interconnection between the motivation for growth and the international orientation of the firm. In both the regression analysis and the structural equation model, the connection between these two study constructs turned out to be the strongest. Considering the development in export share, our results somewhat surprisingly revealed that the average export share declined from 33.05 percent in 2004 to 27.77 percent in 2009. This was independent of the international orientation of the firm. As overall growth in the period was positive and international orientation exhibited a stronger correlation with growth in revenue than with exports, it implies that the internationally oriented firms outperformed the rest not only internationally but also domestically. This is further strengthened by the SEM where international orientation had a marginally stronger impact than motivation on subsequent growth. We interpret the close connection between international orientation and motivation for growth as an indication that both factors describe an underlying aspiration for expansion. It seems that firms with a high international orientation exhibit a general desire for growth. Likewise, it indicates that firms where managers and owners have a strong motivation for growth consider success in export markets as an important means to fulfill their growth ambitions. Export share and export share change are often used as an export performance measure; the results point to weaknesses regarding how well export share measures reflect export performance.

These three arguments show that firms with managers and owners with a strong motivation for growth tend to have a high international orientation and display superior growth both domestically and abroad. There may be several explanations for this. First, it is possible that a

high international orientation and comprehensive foreign operations lead to learning and acquisition of new knowledge and capabilities as foreign markets bring different challenges. This can give them an edge compared with firms that sell their products solely in the domestic market, and thus leads to a potential competitive advantage. Second, the Norwegian economy has experienced considerable growth in this period, which may have lessened the firms' incentives for expansion in the more risky international markets. Thus, even the internationally oriented firms may have focused their resources on capturing as much as possible of the domestic growth rather than venturing out in new markets. It is worth noting that whereas international orientation had a significant positive impact on both growth in exports and revenue, there was no significant relationship between motivation for growth and export performance. This could indicate that a strong motivation for growth alone is not sufficient for success in international markets. The firm also needs a high international orientation, meaning that the whole firm is committed and focused on the export activities.

Management Has a Certain Degree of Volitional Control

Delmar and Wiklund (2008) claimed that the relationship between motivation and growth is weakened because of two factors: the fuzzy and complex nature of firm expansion, and the constraints put on managers by the organization and the environment. Similarly, Wiklund and Shepherd (2003) argued that growth outcomes are not under the total volitional control of management. This implies a weakening of the effect of motivation on subsequent growth. The standardized regression weights from our SEM were 0.153 for motivation and 0.159 for international orientation, indicating that both factors influence the growth path. Hence, management has a certain degree of volitional control over growth outcomes. However, the moderate strength of the coefficients also shows that this volitional control is limited. This means that the behavioral intentions of management will not directly translate into growth as other factors such as macroeconomic development, access to resources, and other external factors can be expected to have an influence on growth.

Davidsson, Achtenhagen, and Naldi (2006) argued that because the external environment of the firm varies across dimensions such as

dynamism, heterogeneity, and munificence, as described by Dess and Beard (1984), external rather than internal factors may largely determine firm growth. Our results clearly show that whereas external factors have an impact on the firm's growth path, internal factors are also influential. We are not able to say anything about the comparative strength of these forces, but we can conclude that managers' intentions influence the strategic direction of the firm, which subsequently influence performance.

Growth in Revenue Does Not Automatically Transfer into Growth in Employment

From the findings in this study, it is also evident that growth in revenue does not automatically transfer into growth in employment. Whereas we found a strong and significant correlation between motivation and subsequent revenue growth, the correlation with growth in employment was both weaker and not significant. Additionally, whereas the firms in the sample averaged a 39.73 percent growth in revenue, the corresponding growth in employment was only 7.14 percent. This discrepancy and the nonsignificant relationship between motivation and growth in employment indicate that even though the firms have grown, they have not realized all of this growth through the hiring of additional employees. This may be attributed to several factors: First, it is possible that increased sales have led to the utilization of prior excess capacity or productivity increases resulting from economies of scale. This means that the firms are able to produce more with the same resources. SME manufacturers in particular, because of their small size, may benefit considerably from economies of scale as their sales increase. Hence, the increased workload due to a higher number of orders may be absorbed through more efficient production. Second, firms may have absorbed the growth through externalization. Several studies have shown that SMEs both seek and use strategic alliances to grow (Freeman, Edwards, and Schroder 2006; Miles, Preece, and Baetz 1999). This can help them overcome shortages of capital, equipment, and other tangible assets through resource sharing (Lu and Beamish 2001). Strategic alliances may therefore present a viable alternative for small firms in a growth phase. Externalization may also have been achieved through the use of outsourcing, enabling growth in revenue without

hiring additional employees. Third, as Delmar (1997) points out, the number of employees is often lagged compared with the financial development. This may be intentional as managers wait to see whether the increased activity is permanent, or non-intentional because the hiring process takes time. Hiring new employees is a long-term decision that introduces additional risk and added costs. This is especially true for SMEs, as each additional employee represents a relatively large increase compared with their total work stock.

Past Growth Does Not Affect Motivation

Whereas motivation is a strong determinant for the subsequent revenue growth of the firm, motivation itself is independent of past growth. This was evident both from the nonsignificant correlation and the structural equation model. Even when comparing the group with the highest past growth against the group with the lowest past growth, no significant difference in motivation was found. This is contrary to the findings of Delmar and Wiklund (2008) who found that past growth positively affected growth motivation. They suggested a mutual feedback loop where realized growth in turn leads to increased motivation for further growth. Our results, however, do not find any support for this as all findings clearly point to the two constructs being independent of each other.

In developing H8, we proposed that the findings of Bagozzi and Kimmel (1995) from the psychology literature were applicable on a firm level. They showed that the connection between past performance and future personal motivation was positive and reinforcing. However, as we found no connection between a firm's past growth and the motivation for future growth, it seems that the findings on personal motivation from the psychology literature are not directly transferable to a firm level. This indicates that motivation for growth in a firm setting is a complex and different phenomenon than personal motivation, as it is heavily dependent on firm-specific factors and the traits and experiences of the people involved.

Past Growth Does Not Limit Future Growth

Our results show that some firms are able to sustain high growth rates over an extended period of time: The top performers in the first period were also the top performers in the

following period. Similarly, the bottom performers also did worst in the second period. This is in concordance with Baum and Locke (2004), who found a significant positive correlation between past and subsequent venture growth in a study of American manufacturing firms. As our study covers a time span of 11 years, it seems safe to conclude that some firms inhibit a fundamental set of characteristics or factors that separate them from other firms and make them able to systematically outperform the rest.

However, it should be noted that the top performers in the first period did not outperform the rest to the same extent in the second. The average growth across all firms was nearly identical in the two periods, and although the top performers grew 3.5 times the average in the first period, they only grew 1.5 times the average in the latter. Both the bottom and middle third improved their growth rates between the two periods, whereas the top third was the only group that experienced lower growth rates in the second period. This indicates that very high growth rates are difficult to sustain over a long time.

Considering firm growth from a resource-based view (Barney 1991, 2001; Wernerfelt 1984), growth should lead to an increased number of resource combinations and thus also enable further growth. Though this may be the case for moderate growth, our results show that extreme growth cannot be sustained over a long period. We are, however, not able to determine whether this is due to limitations of how fast managerial capacity can be developed as suggested by Penrose (1959), strictly convex adjustment costs as suggested by Dierickx and Cool (1989), or if it is because managers are not able or willing to access, deploy, and combine the new resources as suggested by Moran and Ghoshal (1999).

Implications

Implications for Managers, Owners, Investors, and Public Policy Makers

The findings presented in this study have implications for both business practitioners and public policy makers. Our results reveal that managers need to be aware of the role of motivation in achieving growth. Even though external and other internal factors reduce management's volitional control, the growth outcome is still affected by their underlying beliefs and aspirations. Managers therefore

need to ensure that growth goals are aligned with the underlying growth motivation. Further, our findings reveal that firms with a high international orientation performed better both domestically and abroad. Having an international focus may therefore serve as a good strategic option for small firms for two reasons: First, it broadens the firm's scope, allowing them to capitalize on potential market differences when they arise. Second, knowledge and capabilities from international markets may be applied in the home market, giving them a competitive advantage domestically as well. To reap these benefits, managers must ensure that the entire firm see the world as their market, actively seek international opportunities, adapt their products to international markets, and develop the resources required for export activity.

Owners with a strong aspiration for firm growth must keep the important influence of motivation in mind when hiring managers, and find managers who share their ambition for growth. Even though this study has not investigated the consequences of a misalignment in motivation between owners and managers, it seems plausible to assume that a discordance of aspirations may produce suboptimal outcomes. Investors can also benefit from our results, as it is clear that some firms are able to systematically outperform the rest. Identifying these firms should be of great interest to investors, and our findings reveal that motivation and international orientation can aid them in doing so.

For public policy makers, it is important to note that there is a possibility for economic growth if managers' growth aspirations can be increased. According to Delmar and Wiklund (2008), the importance of motivation has largely been overlooked in public policy programs, as most support programs implicitly assume that only the limited availability of resources constrains their growth. However, it is clear from our results that not all firms have a desire to grow. Thus, growth programs should emphasize on identifying and targeting firms who exhibit a desire for growth, but are limited by their resources. By assisting the right firms, both the impact and efficiency of public policy programs can be increased.

Implications for Future Research

As noted by Kolvereid and Bullvåg (1996), a common weakness in most growth models is

the implicit assumption that growth is always a desired objective. The findings presented here show that not all firms want to grow and that the realized growth outcome is clearly influenced by owner and manager motivations. Growth models that ignore motivation and simply assume that all firms exhibit a general desire for growth may therefore produce biased results. In addition, this study has combined constructs that previous empirical studies have treated individually. Our results show a clear connection between motivation, international orientation, and past and future performance. Ignoring these interconnections could lead to incorrect conclusions, and future research should therefore take note of this. One particular issue in further studies should be the effect of past growth on motivation for future growth and international orientation. Based on the literature review, we identified arguments for challenges with regard to sustaining high growth on a company level, whereas the results showed that some firms were able to systematically achieve superior results. This suggests that past growth may be an important factor when attempting to understand firm-level growth patterns.

In the Discussion section, we commented that the close connection between international orientation and motivation for growth may be an indication of an underlying aspiration for expansion. In further studies, the relation between these two factors needs to be further investigated, also including possible differences between large and small home markets.

This investigation has been quantitative in nature, and supplementing this with qualitative data could triangulate our findings and increase the external validity and generalizability. Qualitative studies could also be useful for delving deeper into the underlying factors behind our study constructs. What drives managers' and owners' motivation? Which of the factors leading to growth does motivation primarily affect? How is management's motivation communicated throughout the organization, and how does this directly and indirectly influence the organization?

To investigate the generalizability of our results, similar studies should be conducted in different countries and different time periods. In this regard, the relationship between international orientation and performance is of special interest, to see whether this is a phenomenon found primarily in manufacturing

industries in small open export-oriented economies like the Norwegian. Additionally, as sales growth is not always the main goal of the firm, future studies could also include other performance measures such as profitability, survival, or firm stability. It should be noted that the time span of this study represents one of the strongest growth periods in the Norwegian economy and it can be expected that the results are influenced by this. A similar study conducted in a recession or low growth period may supplement our results and shed more light on the study constructs. One of the surprising observations was the decreasing average export share among the firms in the sample, combined with increased total revenues. This may be explained by the strong development in the Norwegian market in the measured time period, reflecting the mentioned underlying growth aspiration among some managers with consequences both in the home market and in export markets. In further studies, the relationship between international orientation and home market firm growth should be further investigated.

Concluding Remarks

This study has tried to address research gaps related to the interconnection between international orientation and motivation for growth. By examining how these factors influence each other and the subsequent growth in revenue, employment, and exports, a portrait of the successful growth firm emerges: It has owners with a desire for growth that is transferred to the management team. These managers actively seek export opportunities and communicate national and international ambitions to the whole firm. Further, they adapt products to local demands and make sure the organization develops the resources required for international activities. In turn, this contributes to superior growth both domestically and abroad.

Research is often focused on explaining why things happened in retrospect. However, the value of this is limited unless it enables us to say something about the present or predict something about the future. We have found that some firms are able to systematically outperform others, and have identified a set of factors that can be of help when trying to predict the future growth direction of firms. By asking managers and owners about their motivation for growth and mapping the international orientation of the firm, our results show

that it is possible to identify firms that are more likely to outperform the rest. This may be a valuable tool for business practitioners, investors, and public policy makers.

References

- Aaby, N. E., and S. F. Slater (1989). "Management Influences on Export Performance: A Review of the Empirical Literature: 1978–1988," *International Marketing Review* 6(4), 7–26.
- Ajzen, I. (1991). "The Theory of Planned Behavior," *Organizational Behavior and Human Decision Processes* 50, 179–211.
- Bagozzi, R. P., and S. K. Kimmel (1995). "A Comparison of Leading Theories for Prediction of Goal-Directed Behaviours," *British Journal of Social Psychology* 34, 437–461.
- Barkham, R., G. Gudgin, M. Hart, and E. Hanvey (1996). *The Determinants of Small Firm Growth*, 12th ed. Gateshead, Tyne and Wear, UK: Athenaeum Press.
- Barney, J. B. (1991). "Firm Resources and Sustained Competitive Advantage," *Journal of Management* 17(1), 99–120.
- (2001). "Resource-Based Theories of Competitive Advantage: A Ten Year Retrospective on the Resource-Based View," *Journal of Management* 27, 643–650.
- Baum, R. J., and E. A. Locke (2004). "The Relationship of Entrepreneurial Traits, Skill and Motivation to Subsequent Venture Growth," *Journal of Applied Psychology* 89(4), 587–598.
- Baum, R. J., E. A. Locke, and S. A. Kirkpatrick (1998). "A Longitudinal Study of the Relation of Vision and Vision Communication to Venture Growth in Entrepreneurial Firms," *Journal of Applied Psychology* 83(1), 43–54.
- Baum, R. J., E. A. Locke, and K. G. Smith (2001). "A Multidimensional Model of Venture Growth," *Academy of Management Journal* 44(2), 292–303.
- Byrne, B. M. (1998). *Structural Equation Modeling with LISREL, PRELIS, and SIMPLIS: Basic Concepts, Applications and Program*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Carsrud, A., and M. Brännback (2011). "Entrepreneurial Motivations: What Do We Still Need to Know?" *Journal of Small Business Management* 49(1), 9–26.
- Cavusgil, S. T., and S. Zou (1994). "Marketing Strategy-Performance Relationship: In Investigation of the Empirical Link in Export Market Ventures," *Journal of Marketing* 1994, 1–21.
- Chetty, S. K., and R. T. Hamilton (1993). "Firm Level Determinants of Export Performance: A Meta Analysis," *International Marketing Review* 10(3), 26–34.
- Cieslik, J., E. Kaciak, and D. H. B. Welsh (2012). "The Impact of Geographic Diversification on Export Performance of Small and Medium-Sized Enterprises (SMEs)," *Journal of International Entrepreneurship* 10, 70–93.
- Comrey, A. L., and H. B. Lee (1992). *A First Course in Factor Analysis*, 2nd ed. East Sussex: Psychology Press.
- Covin, J., and D. Slevin (1997). "High Growth Transitions: Theoretical Perspectives and Suggested Directions," in *Entrepreneurship 2000*. Ed. D. L. Sexton and R. W. Smilor. Chicago: Upstart Publishing, 99–126.
- Davidsson, P., L. Achtenhagen, and L. Naldi (2006). "What Do We Know about Small Firm Growth," in *International Handbook Series of Entrepreneurship: The Life Cycle of Entrepreneurial Ventures*. Ed. S. Parker. New York: Springer, 361–398.
- Delmar, F. (1997). "Measuring Growth: Methodological Considerations and Empirical Results," in *Entrepreneurship and SME Research: On Its Way to the Next Millennium*. Ed. R. Donckels and A. Miettinen. Aldershot, UK: Ashgate, 199–216.
- Delmar, F., and J. Wiklund (2008). "The Effect of Small Business Managers' Growth Motivation on Firm Growth: A Longitudinal Study," *Entrepreneurship Theory and Practice* 32(3), 437–457.
- Dess, G. G., and D. W. Beard (1984). "Dimensions of Organizational Task Environments," *Administrative Science Quarterly* 29(1), 52–73.
- Dierickx, I., and K. Cool (1989). "Asset Stock Accumulation and Sustainability of Competitive Advantage," *Management Science* 35, 1504–1511.
- Freeman, S., R. Edwards, and B. Schroder (2006). "How Smaller Born-Global Firms Use Networks and Alliances to Overcome Constraints to Rapid Internationalization," *Journal of International Marketing* 14(3), 33–63.
- Hu, L. T., and P. M. Bentler (1999). "Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria versus

- New Alternatives," *Structural Equation Modeling: A Multidisciplinary Journal* 6(1), 1–55.
- Kanfer, R. (1990). "Motivation Theory and Industrial and Organizational Psychology," in *Handbook of Industrial and Organizational Psychology*, 2nd ed. Eds. M. D. Dunnette and L. M. Hough. Palo Alto: Consulting Psychologists Press Inc, 75–170.
- Khandwalla, P. (1977). *The Design of Organizations*. New York: Harcourt Brace Jovanovich.
- Kinnear, P. R., and C. D. Gray (2009). *SPSS 16 Made Simple*, 1st ed. East Sussex: Psychology Press.
- Knight, G. A. (2001). "Entrepreneurship and Strategy in the International SME," *Journal of International Management* 7, 155–171.
- Knight, G. A., and S. Cavusgil (2005). "A Taxonomy of Born-Global Firms," *Management International Review* 45(3), 15–35.
- Kolvereid, L., and E. Bullvåg (1996). "Growth Intentions and Actual Growth: The Impact of Entrepreneurial Choice," *Journal of Enterprising Culture* 4(1), 1–17.
- Leonidou, L. C., C. S. Katsikeas, and N. F. Piercy (1998). "Identifying Managerial Influences on Exporting: Past Research and Future Directions," *Journal of International Marketing* 1998, 74–102.
- Lockett, A., J. Wiklund, J. Davidsson, and S. Pirma (2011). "Organic and Acquisitive Growth: Re-Examining, Testing and Extending Penrose's Growth Theory," *Journal of Management Studies* 48(1), 48–74.
- Lu, J. W., and P. W. Beamish (2001). "The Internationalization and Performance of SMEs," *Strategic Management Journal* 22(6), 565–586.
- McDougall, P. P., and B. M. Oviatt (1996). "New Venture Internationalization, Strategic Change, and Performance: A Follow Up Study," *Journal of Business Venturing* 11, 23–40.
- Miles, G., S. B. Preece, and M. C. Baetz (1999). "Dangers of Dependence: The Impact of Strategic Alliance Use by Small Technology-Based Firms," *Journal of Small Business Management* 37(2), 20–29.
- Moen, Ø. (2002). "The Born Globals—A New Generation of Small European Exporters," *International Marketing Review* 19(2), 156–175.
- Moen, Ø., and P. Servais (2002). "Born Global or Gradual Global? Examining the Export Behavior of SMEs," *Journal of International Marketing* 10(3), 49–72.
- Moran, P., and S. Ghoshal (1999). "Markets, Firms, and the Process of Economic Development, Academy of Management," *The Academy of Management Review* 24(3), 390–412.
- Morgan-Thomas, A., and M. V. Jones (2009). "Post-Entry Internationalization Dynamics Differences between SMEs in the Development Speed of their International Sales," *International Small Business Journal* 27(1), 71–97.
- Nummela, N., K. Puumalainen, and S. Saarenketo (2005). "International Growth Orientation of Knowledge Intensive SMEs," *Journal of International Entrepreneurship* 3(1), 5–18.
- Nunnally, J. C. (1978). *Psychometric Theory*, 2nd ed. New York: McGraw-Hill.
- OECD (1997). *Globalization and Small and Medium Enterprises (SMEs)*. Organization for Economic Cooperation and Development, Paris.
- Oviatt, B. M., and P. P. McDougall (1994). "Toward a Theory of International New Ventures," *Journal of International Business Studies* 25(1), 45–64.
- Penrose, E. (1959). *The Theory of the Growth of the Firm*. New York: Oxford University Press.
- Reuber, A. R., and E. Fischer (2002). "Foreign Sales and Small Firm Growth: The Moderating Role of the Management Team," *Entrepreneurship Theory and Practice* Fall, 29–45.
- Robson, P. J. A., and R. J. Bennet (2000). "SME Growth: The Relationship with Business Advice and External Collaboration," *Small Business Economics* 15(3), 193–208.
- Shane, S., E. A. Locke, and C. Collins (2003). "Entrepreneurial Motivation," *Human Resource Management Review* 13, 257–279.
- Sousa, C. M. P., F. J. Martínez-López, and F. Coelho (1998). "The Determinants of Export Performance: A Review of the Research in the Literature Between 1998 and 2005," *International Journal of Management Reviews* 10(4), 343–374.
- Vermeulen, F., and H. Barkema (2001). "Learning through Acquisitions," *Academy of Management Journal* 44(3), 457–476.
- Weitzman, M. L. (1996). "Hybridizing Growth Theory," *The American Economic Review* 86(2), 207–212.

- Wernerfelt, B. (1984). "A Resource-Based View of the Firm," *Strategic Management Journal* 5(2), 171–180.
- Westhead, P., M. Wright, and D. Ucbasaran (2001). "The Internationalization of New and Small Firms: A Resource-Based View," *Journal of Business Venturing* 16, 333–358.
- Wiklund, J., and D. A. Shepherd (2003). "Aspiring For and Achieving Growth: The Moderating Role of Resources and Opportunities," *Journal of Management Studies* 40(8), 1919–1942.
- Zahra, S. A., R. D. Ireland, and M. A. Hitt (2000). "International Expansion by New Venture Firms: International Diversity, Mode of Market Entry, Technological Learning, and Performance," *Academy of Management Journal* 10(1), 925–950.
- Zinbarg, R. E., W. Revelle, I. Yovel, and W. Li (2005). "Cronbach's α , Revelle's β , and McDonalds, ω H: Their Relations with Each Other, and Two Alternative Conceptualizations of Reliability," *Psychometrika* 70(1), 123–133.
- Zou, S., and S. Stan (1998). "The Determinants of Export Performance: A Review of the Empirical Literature between 1987 and 1997," *International Marketing Review* 15(5), 333–356.

What Does Really Matter in the Internationalization of Small and Medium-Sized Family Businesses?

by *Andrea Calabrò, Marina Brogi, and Mariateresa Torchia*

Internationalization of family businesses is often considered a way to revitalize both the family and the business. However, the debate on its challenges and constraints is still inconclusive. This study explores whether incoming generations' involvement impacts the decision to exploit and explore international opportunities and to what extent altruism and competence-based trust mediate that relationship. Three propositions are formulated drawing from international entrepreneurship literature and stewardship theory. To validate this framework, a multiple case study on four Italian family firms has been conducted. Implications for theory and practice are finally discussed.

Introduction and Motivation

Limited research has examined the factors that foster the internationalization of family firms (Zahra 2003). Nevertheless, there are many arguments related to the need for family businesses (hereafter FBs) to internationalize. The globalization of the world economy, for example, has spurred firms of all sizes and ownership types to expand their international operations (Zahra and George 2002). Moreover, given that a large number of firms and industries have broadened their global outlook over the last few decades, it is logical to suppose that FBs have also perceived internationalization as an important step for their expansion and growth (Claver, Rienda, and Quer 2009). The decision to expand to new markets abroad is seen as a way to revitalize the family and the business and can thus positively contribute to

FBs' performance (Claver, Rienda, and Quer 2009). It gives new employment opportunities to family members and if successful, it is a good form of growth that is positive for the next generations (Zahra 2003).

The issue of how FBs cope with the complexity arising from the internationalization of their operations is one of the most pressing issues in the fields of FB research and international management. Therefore, it seems important to make efforts to understand the complexity of decision-making processes associated with FBs' internationalization (Claver, Rienda, and Quer 2009; Naldi et al. 2007) especially when we take into account small and medium-sized FBs often characterized by constraints in resources, lack of managerial skills, and which evolve and change over time and generations.

Despite the increasing interest on this topic, it is not clear what does really matter in the

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internationalization of FBs. Its main drivers, challenges, and constraints are still under-researched (Pukall and Calabrò 2014). The aim of this study is to explore whether incoming generations' involvement impacts the decision to exploit and explore international opportunities and to what extent altruism and competence-based trust mediate that relationship. Three propositions are formulated drawing from international entrepreneurship literature (Oviatt and McDougall 2005) and stewardship theory (Davis, Schoorman, and Donaldson 1997). To validate this framework, a multiple case study analysis on four Italian small and medium-sized family firms has been conducted. The main findings suggest that when "epochal" changes (incoming generation's involvement) suddenly break down, they contribute positively to the exploration and exploitation of international entrepreneurial activities. Moreover, the existence of interpersonal ties based on altruism and competence-based trust between senior and incoming generations mitigates this relationship.

This article makes several contributions to theory and practice. First, we add to the FB literature by showing how international entrepreneurship literature may shed new light to the understanding of incoming generation's involvement as a particular "episode" that can lead to an "era" of rapid and dedicated internationalization. Moreover, by formulating and discussing propositions on the mediating role of altruism and competence-based trust in relation to FBs' internationalization, we respond to Zahra's (2003) call for more studies using stewardship theory as the main lens of analysis for FBs' international behaviors. Second, results from the qualitative analysis show that different international behaviors and perceptions exist between senior and incoming generations. In fact, the timing, scope, and modes of internationalization change in relation to family firms' life cycle, the degree of generation's involvement, the founder/owner's paternalistic view of the firm, and other specific FBs' features. Finally, this study has also practical implications. It gives interesting perspective to FBs' owners by highlighting the need to ensure that multiple generations understand the business. This understanding prepares family members to share the risks associated with the decision to internationalize the business (and the family) while enabling them to contribute in a meaningful way to it. Furthermore, FBs' owners and

managers might better understand the factors that may spur their international commitment, handling them properly.

The article is organized as follows: an overview on FBs' internationalization debate is given in the first part of the second section. Propositions are formulated in the rest of the section. The methods are shown in the third section. Results and discussion follow in the next two sections. Concluding remarks and future directions are then addressed.

Theoretical Debate and Propositions Formulation

Research on the internationalization of FBs had its starting point with the seminal article of Gallo and Sveen (1991), which discusses restraining and facilitating features of FBs concerning their internationalization. Whereas only few further studies were conducted throughout the 1990s (e.g., Gallo and Pont 1996), there is an increase in publications starting from 2000 up to 2005 (e.g., Zahra 2003; Fernández and Nieto 2005). After that, the topic has become even more popular, with a recent peak from 2010 to 2012 (e.g., Claver, Rienda, and Quer 2009; Sciascia et al. 2012). Looking at the existing literature on FB internationalization, we can argue that the results related to the impact of family ownership and influence on different aspects of internationalization, for example, type of market entry, speed of international expansion, or degree of international sales, are highly inconsistent. Whereas some authors come to the conclusion that family ownership and involvement have a positive impact on the internationalization of a business (e.g., Zahra 2003), others beg to differ, arguing that these family-related factors have a negative impact on internationalization dimensions (e.g., Graves and Thomas 2006). Some scholars even find no difference between FB and non-FBs regarding certain dimensions of internationalization (e.g., Cerrato and Piva 2012). This inconsistency of findings raises questions on how FBs manage and cope with the complexity arising from their internationalization processes and which are the main features that can foster or inhibit it. Therefore, there is an urgent need to explore how specific FBs' features affect international activities. To further investigate those issues, we combine international entrepreneurship literature to explain incoming generation's involvement impact on the decision to internationalize with stewardship theory by using altruism and

competence-based trust as mediating aspects of the above-mentioned relationship. With this last point, we address Zahra's (2003) call for more research using stewardship theory as the main lens of analysis for FBs' international behaviors.

Incoming Generation's Involvement

Going international is a tricky and very demanding decision process requiring human, financial, and logistical resources and a clear strategy for taking the firm forward (Calabrò and Mussolino 2013). FBs may see the chance to grow faster if they expand beyond national borders but they perceive risks associated to the decision to leave the domestic market to explore business opportunities abroad (Kets de Vries 1993). Many arguments suggest that internationalization of small and medium-sized enterprises (SMEs) and family SMEs takes place gradually and in stages after exhausting domestic opportunities (Segaro 2010). Accordingly, the incremental internationalization theory shows that they are expected to incrementally internationalize their business to geographically close markets with less psychic distance (Lu and Beamish 2001). The vast majority of firms, and especially traditional FBs, are embedded in their local environment and do not have the resources to enter international markets (Autio, Sapienza, and Almeida 2000; Bloodgood, Sapienza, and Almeida 1996). If they do enter international markets, it is likely to be at a low intensity through low resource-intensive modes such as responding to orders and export agents or being lured abroad through subcontracting for domestic customers (Westhead, Wright, and Ucbasaran 2002). Nevertheless, some firms (and also FBs) may begin their activities directly with an international orientation (Knight and Cavusgil 2004). Indeed, international business scholars try to give an explanation to the internationalization behavior of firms known as international new ventures/ born global firms, early internationalizing firms, and sometimes also referred to as accelerated internationalizing firms (Rialp, Rialp, and Knight 2005; Zahra 2005; Zucchella, Denicolai, and Denicolai 2007). In addition to that, there is an emerging stream of literature identifying the so called "born-again global" (Bell, McNaughton, and Young 2001). The empirical evidence of these types of internationalizing firms is grounded in international entrepreneurship literature. International entrepreneurship is defined as "the discovery,

enactment, evaluation, and exploitation of opportunities across national borders to address future goods and services" (Oviatt and McDougall 2005). This literature has great merits in contributing to the debate on the role of entrepreneurs and top management teams in entrepreneurial firms. We suggest that this research stream is a relevant framework to understand how FBs behave in managing international opportunities by exploring how key decision-makers (senior and incoming generations) make their strategic choices (Andersson 2000). FBs are usually characterized by the presence of one main decision-maker and during their life cycle by the involvement of incoming generations into the family and the business systems. Family principals may face two opposing forces related to the decision to go international: (1) the exploitation and exploration of opportunities across national borders might drive them to grow and expand beyond their traditional markets, whereas (2) the wish to maintain family control encourages stability and the development of low-risk strategies within the traditional product market. Moreover, these two opposing forces might be perceived differently between senior and incoming generations. Many worldwide examples suggest that FBs have overcome these challenges with enormous success, becoming family-run multinational companies that are famous examples of how to combine the desire for international expansion and family control. Nevertheless, some studies indicate the predominance of the second driver (maintain family control) over the first one (the exploitation and exploration of international opportunities), so that FBs appear to be less inclined to expand their international activities (Fernández and Nieto 2005).

In order to shed new light on this complex issue and to advance the debate on facilitating and constraining factors to FBs' internationalization, we combine the evidence existing in the international business literature on firm internationalization triggered by particular "episodes" that can lead to rapid international expansion (Bell, McNaughton, and Young 2001) with the "special" and "unique episode" that distinguishes FBs from other types of organizations: incoming generation's involvement. Therefore, we suggest that by using this theoretical lens of analysis, incoming generation's involvement might foster activities associated with international entrepreneurship (exploitation

and exploration of international opportunities), which may help FBs succeed into the next generation by reaching new markets (e.g., internationalizing operations and sales) or creating/reinventing products and services for international customers (Sharma, Chrisman, and Chua 1997). In support to this view, there is much evidence in literature suggesting that second/subsequent generation family members (the incoming generation) may be most likely to add fresh momentum to the entrepreneurial endeavor of FBs (Salvato 2004). This particular “episode” (incoming generation’s involvement), if properly managed, might lead to an “era” of rapid and dedicated internationalization. Incoming generation’s involvement through renewed international orientation, more skills and capabilities, commitment and experience, changes in ownership, board composition, and management might be the catalyst for a shift in strategic direction leading to internationalization. Therefore, we formulate the following proposition.

Proposition #1: The incoming generation’s involvement constitutes a particular “episode” in FBs’ life cycle that positively influences activities associated with international entrepreneurship (the exploration and exploitation of international opportunities).

The Mediating Role of Altruism and Competence-Based Trust

In our application of stewardship theory (Davis, Schoorman, and Donaldson 1997) to FBs’ international behaviors (Zahra 2003), we consider altruism and trust as main elements that positively mediate the impact of new generation’s involvement on the degree of international activities. The presence of the incoming generation in the firm’s operations (Lansberg 1999) creates an organizational culture that can encourage the exploitation and exploration of international growth opportunities. However, this entrepreneurial endeavor of new generations might cause uncertainty and skepticism and might find some resistant behaviors among senior family members and siblings. Though not immune to self-serving behaviors and opportunism, family members often use altruism to gain support for their firm’s long-term goals (Schulze et al. 2001). Indeed, the presence of a stewardship culture materializes in FBs through long-term orientation, aligned values between the family and business, and

family identification with the business (Zahra et al. 2008) or by reciprocal altruism, participative decision-making, and the sharing of control in firm governance (Eddleston et al. 2010). The sharing of experience and knowledge of the incoming generation combined with altruism and trust, which characterize the family system, might encourage investments in entrepreneurial activities (James 1999) as the decision to internationalize (Segaro 2010). Though internationalization can create conflicts within the family (and within different generations), it also provides significant opportunities for profitability and growth.

Altruism is traditionally defined in the economic literature has a calculated utilitarian orientation, where an altruistic exchange would maximize the welfare of the entire family engaged in a common endeavor (Becker 1981). For Becker (1981), altruism is associated with efficiency and economic rationality in family firms. The importance of altruism has received renewed attention in the FB literature over the last few years (see for instance, Lubatkin et al. 2005; Lubatkin, Durand, and Ling 2007).

The presence of altruism indicates that the family and firms’ objectives are ahead of personal and opportunistic views. FBs that are characterized as altruistic may have an advantage because members’ interests are more aligned with the success of the FB (Eddleston and Kellermanns 2007). In such altruistic FBs, members are highly dedicated to the business and they believe that they have a common family responsibility to see the business prosper (Cabrera-Suárez, Saá-Pérez, and García-Almeida 2001). In particular, according to stewardship theory of the FB (Corbetta and Salvato 2004), altruism may explain why in some FBs members are able to successfully work together and run a business, whereas in others, family members are laden with animosity that deteriorates performance (Kellermanns and Eddleston 2004). The presence of altruism might help all the family to pursue the international strategic direction given by the incoming generation as a strategy to preserve the organization, enhance legitimacy, and make it more profitable for the whole family and for future generations. Altruism, indeed, increases communication and cooperation, reducing information asymmetries among family principals and facilitating the use of informal agreements (Daily and Dollinger 1992). Altruism indicates that internationalization helps owner-managers and their families to

achieve their goals while ensuring the survival of the firm. Indeed, senior and incoming generations will place the firm's objectives ahead of their own (Zahra 2003). This might foster risk-taking and risk-sharing by, for example, exploring international growth opportunities. Therefore, we formulate the following proposition.

Proposition #2: The presence of long-term orientation, aligned values between the family and business, and participative decision-making (presence of altruism) between senior and incoming generations positively mediate the impact of incoming generation's involvement on the level of international entrepreneurship (the exploration and exploitation of international opportunities).

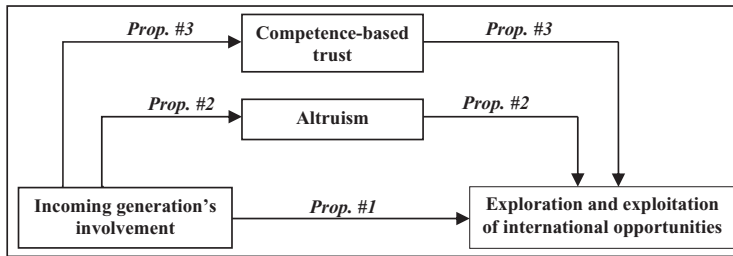
Trust is also a central element of stewardship culture, and Zahra (2003) suggested the importance of investigating other dimensions of stewardship theory among FBs when it comes to their international processes. In order to fill this gap, we employ trust, as a dimension of stewards' behavior within FBs, in relation to the decision to go international. It seems interesting to understand the main reasons that lead us to argue that trust develops between senior and incoming generations, thus positively mediating the impact of the incoming generation on FBs' international activities. First, we argue that based on mutual trust, a common vision of the internationalization process and its goals can be developed among different generations. Second, when feelings of trust are developed among senior and incoming generation, all the other actors (family and nonfamily) might benefit from that (Westphal 1999) and be more compliant with the overall strategic decision (e.g., going international). Finally, going international is a risk-taking activity and the general risk aversion arising from this decision is in part related to the fear of losing socioemotional wealth (Berrone, Cruz, and Gomez-Mejia 2012). The existence of trust between senior (the tradition) and incoming (the future) generations might be useful to manage those perceived risks and mitigate the socioemotional wealth loss orientation often characterizing FBs.

We define trust by following Mayer, Davis, and Schoorman's definition: "the willingness to be vulnerable to the actions of another party based on the expectation that the other will

perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party's behaviours" (Mayer, Davis, and Schoorman 1995, p. 712). We believe that it is important to underline that trust can emerge either from an affective experience with the other person (Rempel, Holmes, and Zanna 1985) or from evidence of the other party's competence and reliability (Butler 1991). In this study, we focus on the second type of trust (competence-based trust) and on how it might mediate incoming generation's contribution to the decision to internationalize the FB. Therefore, we take into account the distinction between competence-based trust and integrity-based trust (Huse 2007), which align with the broader distinction in social psychology between two basic dimensions on which people map others, competence and warmth (Fiske, Cuddy, and Glick 2007). We rely only on competence-based trust because we believe that in relation to the incoming generation's involvement and its effect on internationalization, the fact of relying upon another person to have sufficient competence to perform a task or assignment is mainly represented by competence-based trust. Indeed, export activities require complex strategic decisions involving different functions, skills, and knowledge. Stemming from those arguments, we argue that the extent to which senior and incoming generations rely on each other's viewpoints depends on the competence-based perception of trust. The perceived trust based on the competence is more likely to affect the decision to go international. If the incoming generation is providing a detailed and planned suggestion on how to start an internationalization strategy, competence-based trust provides cues as to how to process, interpret, and act upon the information. It is founded on the ability or competence of the incoming generation. It enables the rest of the family (and in particular the senior generation) to trust the incoming generation because of the skills and creativity in strategic problem solving. It reassures these actors as to the efficacy of the proposal and strengthens their belief about the successful implementation of the internationalization decision. Hence, we formulate the following proposition.

Proposition #3: The competence-based trust that the senior generation relies upon the incoming generation positively mediates the impact of incoming

Figure 1
The Research Model



Source: own elaboration.

generation's involvement on the level of international entrepreneurship (the exploration and exploitation of international opportunities).

The overall research model is summarized in Figure 1.

Research Methods

There is still no widely accepted definition of FB in academia (Astrachan and Shanker 2003; Littunen and Hyrsky 2000; Litz 1995; Sharma and Zahra 2004; Sharma, Chrisman, and Chua 1997; Westhead and Cowling 1998). Nevertheless, what makes an FB different is the relationship between *ownership, management, and family involvement* (Chua, Chrisman, and Sharma 1999). Indeed, FBs have many features that make their investigation a particularly challenging opportunity. *We consider one specific type of FB, that is a firm with less than 250 employees* (the European Union's cutoffs for SMEs), with families having the voting control (Neubauer and Lank 1998) and the majority of ownership (more than 50.0 percent). Moreover, adopting Fernández and Nieto's (2005) definition of family SMEs, we also consider if there are family members in managerial positions.

According to Yin (2003), a multiple case-based investigation is defined as "an investigation strategy directed to understand the present dynamics in singular contexts." The present investigation could be judged as a singular phenomenon for which it would be appropriate to have a first approach by means of the case studies, as we are in a first exploratory phase of

the investigation. As it is collected in Yin (2003), in order to minimize this effect, the triangulation was introduced in the process of obtaining the data of the analyzed cases. Considering the FB as the main unit of analysis, this empirical research is based upon a systematic application of the multiple case study approach to the investigation of internationalization patterns of four Italian FBs. The *selection of the cases* was made taking into consideration two important facts: firstly, *the FB should have or had some international activities*, and secondly, *it should have more generations involved into the business*. Moreover, we did not have limitations on FBs that successfully come with internationalization. We also looked for business sizes, different sectors, and number of family members involved in the business, etc.

Multiple case studies analysis allows the researcher to explore the phenomena under study through the use of a replication strategy (Yin 2003). According to this model, if all or most of the cases provide similar results, there can be substantial support for the development of a preliminary theory that describes the phenomena (Eisenhardt 1989). The four FBs that represent the object of this investigation are presented in Table 1, where the company type, the main activity, the contact person, and the information about the interviews are briefly resumed.

Source of Information

This study arises from a self-enriching process of reading, observation, interviewing,

Table 1
Case Studies' Characteristics

Information/Analyzed Family Firms	Company A	Company B	Company C	Company D
The Interviewees	60	68	51	58
Age (years)	Father	Father	Father	Father
Position within the family	Sole director	Chairperson	Sole director	CEO
Position within the business	69	120	60	86
Length (minutes)	1987	1969	1930	1980
Foundation year	25	78	25	80
Number of employees	1st and 2nd	1st and 2nd	2nd and 3rd	1st
Generations operating into the <i>business</i>	No	No	Yes	No
Generational transfer is happening	Yes	Yes	Yes	Yes
Family ownership	4	3	4	1
No. family owners	4	3	3	1
No. family members in the business	4	3	2	1
No. family members in leadership positions	No	Yes	No	Yes
Has a board of directors				

Source: own elaboration.

and writing. The reviewed literature addresses the current debate on FBs' internationalization. Moreover, by using stories of FBs from the Italian context, the paper gives an explanatory model to understand FBs' internationalization that is not only limited to how decision-making processes take place within the family and the firms but also focuses on the importance of new generations' involvement, altruism, and trust. The main source of information for the case studies was the semi-structured interview. Extensive face-to-face interviews were run with sole director, chairperson, and/or chief executive officer (CEO). The contact was carried out by the means of a telephone call, the potential interviewees being informed about the characteristics of the investigation and being asked to do a questionnaire. Later on, an e-mail was sent with detailed information about the investigation and also the protocol of the interview was attached. The interviews, with an extent of more than one hour in average, were recorded with the consent of the interviewees, and afterward full write-ups were constructed on each company in the form of a detailed case study, focusing on the specific characteristics of each case situation.

Validity and Reliability

Sources of multiple data, as Yin (2003) proposes, are used to attempt to achieve the effect of the triangulation that guarantees the internal validity of the investigation. According to Yin (2003), it should be guaranteed the quality of the design of the study by introducing a series of methods and tests of validity and reliability along the methodological phases. The methods used in this investigation so as to guarantee the validity and reliability of the analyzed data are explained in what follows: (1) a number of interrelated sources were collected and analyzed: annual reports, corporate codes, information from products brochure and from the company website, newspaper articles; (2) a previous report of each case was edited, summarizing the in-depth interviews, and sent to the interviewees in order to avoid possible interpretation errors; (3) an investigation protocol was established in order to guarantee that, in case of replication studies, obtained results would be similar; and (4) the transcription of the interviews being done, a resume of each of them, was sent to the interviewees having as an objective the approval of the received information.

Main Results

This section first presents each case study and the joint discussion of the main evidence that emerged from the overall analysis.

Company A

Company A is an Italian FB operating in the personal care sector. It was established in 1987 and is run mainly by its sole director (family member) with international experiences and skills. The founder's idea in establishing the business was driven by the desire to form a long-lasting entity in which his two sons could accomplish themselves. The company is wholly owned by the family: the founder and his wife each have a 26.0 percent stake and each of the two sons has a 24.0 percent interest. There is no formal governance mechanism (e.g., presence of a board of directors) even if the founder underlines that there is an informal family council that generally takes place at the family's home. Decisions are made together and if there are different opinions, the final decision is that which has the majority of votes. As it emerged during the interview, Company A can be considered as an FB.

[. . .] ours is truly a FB [. . .] it was established because I have two sons and my wife and I wanted to give them something for the future [. . .] our vision of the business stems from our idea of family [. . .] (Sole Director).

Company A's sales structure embraces the entire Italian territory with agreements with all of the most important Italian retailers. Moreover, the company presents a good international propensity (number of countries to which the company exports). Its export intensity (percentage of revenues from markets outside Italy) is currently 5.0 percent, whereas imports total 15.0 percent. As concerns internationalization, the interviewee states that he is aware that international sales are fundamental for the long-term survival of his company. The first step toward international markets took place around 2000, the year in which the first contract with an important international client was signed. Some excerpts of the interview follow to provide a direct perception of the interviewee's thinking.

[. . .] internationalizing my business for me means showing the business and its

products outside Italy [. . .], taking part in international fairs and technical support from state agencies are of vital importance [. . .] the internationalization of one's company also reflects, very often, cultural factors which enable to see the opportunities round the corner [. . .] (Sole Director).

As pointed out in the interview, opening the business to international markets enables to overcome the problems related to the saturation of domestic markets. More than once the interviewee highlighted that

[. . .] When there is a crisis, especially today, finding new customers which pay on time and are financially sound is fundamental to achieve successful business growth [. . .] customers from outside Italy have these qualities and it is for this reason that we are particularly interested in tapping them [. . .] (Sole Director).

The new generation's involvement in the business is, according to the interviewee, an important event that radically changes the approach to international markets. The interviewee believes that continuous training, competences, and innovation orientation are some of the characteristics of the new generation.

The internationalization process of Company A starts around 2000 through an initiative promoted by an Italian state authority for trade relations with Morocco. However, this experience did not lead to the desired results and actually determined a general distrust in the international strategies promoted by state authorities. The advent of the new generation (two sons) in the business (2007) is an important milestone together with an intense product differentiation activity. This enabled to attract many international customers (Tunisia, Albania, and Malta) without implementing specific internationalization strategies (passive exporting). An interesting perspective is the idea of turning to China, but the main strategic directives do not appear to be clear yet.

[. . .] with my sons we are carefully assessing the means with which to penetrate the Chinese market [. . .], to date the most feasible route seems to be that of establishing contractual relations with

local concessionaries [. . .] direct contacts with entrepreneurs operating in the same sector and the possibility of creating partnerships is another option [. . .], the possibility of forming a new position in the company (with a professional from outside the family) for this difficult task is not ruled out [. . .] (Sole Director).

As concerns other internationalization strategies and timing, the founder does not foresee any possible delocalization as the entire production cycle must occur in Italy. As to timing, there does not seem to be a precise identification. Conversely, attentive analyses were presented as concerns the specific risks connected to international activities.

[. . .] there are numerous risks connected to international activities [. . .], there is great concern on the company's capability of satisfying future foreign demand [. . .] also organizational risks must not be underestimated, problems related to foreign exchange rate fluctuations and the language problem (despite the fact that my sons know many languages) and the reliability of potential foreign partners [. . .] (Sole Director).

As concerns the relationships between him and the two sons when it comes to the decision-making process related to international activities, the interviewee underlines that there are conflicts with the new generation.

[. . .] the two generations work in close contact, and it is clear that the initiatives for internationalization come from the younger [. . .], my sons show a higher risk propensity and are constantly motivated by the search of new opportunities from foreign markets. This often triggers conflicts and difficult decision-making dynamics [. . .] (Sole Director).

Long-term vision, culture, and conflict management are at the base of company decisions.

[. . .] all we are doing would dissolve into nothing if there wasn't a strong corporate culture in the most effective means of managing conflict dynamics [. . .], corporate culture and a system of unwritten norms that promote tolerance

and reciprocal trust are fundamental for serenely living together and successful business making [. . .] (Sole Director).

Nonetheless, decisions are taken together after a process that involves everyone. The presence of the founder and his participating leadership style very often mitigate the internal conflicts that arise from the sons' diverging opinions. Altruism and trust between the new generation and the founder are key features of the decision-making process. Actually, the founder considers and respects his sons' expertise (especially as a result of their experience in important multinational groups operating in the same sector), and the relationships with them are connoted by the presence of trust relationships based on their competence (competence-based trust).

Company B

Company B is one of the leading companies in Europe and in the world in airport logistics. The company was established in 1970, operating in the sector of precision mechanical construction from the early fifties. Over the years, the group achieved a considerable experience in the production of equipment dedicated to airport assistance and became the Italian leader in this sector. The business is entirely owned by the family: the founder holds a 40.0 percent stake, and his two children a 30.0 percent stake each. There is a formal governance mechanism (a board of directors). The chairperson of the board is the founder. The managing director (MD) is a person outside the controlling family. The decision to have an outside MD stems from the need to have a mediator between the founder and the new generation. Once the succession is completed, the MD will just have a representative role. Company B is an FB as specified by the founder.

[. . .] this is a FB since the family owns the company [. . .], but orientation to the market, towards internationalization and the industry's characteristics mean that our company cannot be considered a traditional FB [. . .] (Chairperson).

As to the involvement of his offspring in the company, the interviewee specifies that it was not his idea, but it was his children's wish to be involved in the FB. The company presents a strong and lasting propensity to international

activities, partly because of the specific characteristics of the industry and its products. Export intensity (percentage of revenues from markets outside Italy) is currently 37.0 percent, whereas imports are a negligible percentage. With specific reference to internationalization, the interviewee provides some specific information on the moment in which the company began its internationalization process.

[. . .] actually from 1970 we started producing equipment with foreign markets in mind. We decided to start from those conferences in which we took part to show our products. It all worked through a sort of word of mouth: we sold our machines in Singapore because we had sold them before in Brazil, and since our customers were satisfied they spoke well of us [. . .] (Chairperson).

The company operates in 38 countries (*export propensity*), including France, Belgium, Spain, Portugal, Greece, Cyprus, Malta, Slovenia, Albania, Tunisia, Egypt, Arab Emirates, Congo, Angola, Zambia, Mauritius, Brazil, Argentina, Norway, and Denmark. Particular attention is also dedicated to Africa, China, and Turkey.

From inception, the company has been projected to the international markets, as evidenced by the various forms in which it has participated, not only direct exports but also delocalization of production in other countries and joint ventures with international partners. In fact, to date, the company has delocalized the production of the less complex machines to Tunisia, because of the cost-effectiveness of this solution. There are commercial agreements with Spanish, Austrian, and German companies. Among the main perceived risks of international activities, the interviewee cites "country risk," "increasing competition," "minimal support from national government entities," "the China effect," and the "difficult and complicated relations with the banking system."

Even if during the interview the founder states that he had not programmed the entry of his offspring in the company, as the conversation continues, it is clear that the involvement of the new generation was fundamental to manage the intrinsic complexity stemming from the international and dimensional growth of the company.

[. . .] the company has had to adapt to changes in the market; the presence of my children enabled to expand the company on the basis of the new needs [. . .] (Chairperson).

The company's expansion was considerably affected by the advent of the new generation in the business. An excerpt of the interview strongly underlines this last aspect.

[. . .] the relationship with my children is now an evolved relationship [. . .] we are no longer striving to strike a balance [. . .] organizational structure, role and responsibilities are well defined [. . .] (Chairperson).

The founder occupies a central position in the business. He has trust relationships with his customers. One of his main concerns is the transfer of these relationships to his children. The interviewee underlines that even though the hierarchical father-son relationship is not particularly felt within the company, it seems to be more marked in negotiations with customers in which the founder plays a central role.

Altruism and trust are some of the ingredients which, according to the interviewee, enabled the company to survive over time. The authoritative but at the same time open personality of the chairman permitted the transfer of these values to the new generation.

[. . .] there have never been any real clashes between the two generations however it must be underlined that there are often considerable frictions as concerns the company's style of strategic guidance, there is a different entrepreneurial vision [. . .], a constructive conflict between tradition and modernity, pure entrepreneurship and structure is always solved through the altruistic behaviours we all have and the trust I have in my children's competence [. . .] (Chairperson).

Company C

Company C boasts a centennial history and was established by a family dedicated to toil for its love of the soil. It encompasses three great experiences that mature over decades: cultivation of land, transformation of its fruits, and their conservation. The family is the custodian

of this process. Over the generations, it has been transferred with dedication and renovated with competence to realize wholesome products full of taste. At the helm is a family of farming entrepreneurs, born in the 1930s, which from direct production evolved toward direct commercialization of farm produce, in particular oil and olives. Second- and third-generation family members are involved in the business. The company was established with the commercialization of products in the south of Italy, whereas it was the interviewee (second generation) who commenced the internationalization process, by seizing the opportunity of exporting, in the 1980s directly in the United States. The company's operations are currently run by the interviewee and his wife, who are in charge of production, and the son, who is in charge of commercialization and the real estate management. The interviewee's daughter is not actively involved in the company and does not take part in business decisions.

The company is entirely owned by the family with a majority stake held by the second generation. The company does not have a completely defined organizational structure; moreover, there are no formal governance mechanisms such as board of directors. However, there is a "pseudo family board" regulated by a system of unwritten relational norms that are based on altruistic respect and reciprocal trust.

The internationalization process started around the 1980s on an occasional basis especially thanks to the entrepreneurship of a customer, which as an intermediary, built a system of relations and product trades with the United States. The company now exports 60.0 percent of production of oil and olives to one foreign market, the United States. The interviewee continues

[. . .] internationalization is a great opportunity which favours growth [. . .] I do not see or perceive specific risks associated to this [. . .] (Sole Director).

The means through which the company performs its international activities is by means of direct export through specialized foreign distributors. Currently, the process is consolidated and is based on direct exports and occurs through distributors on foreign markets, even though the company is assessing the opportunity of proceeding with further diversifications.

[. . .] I am very satisfied [. . .] my company has a profitable business and we benefit from a positioning which enables us to look at opportunities without taking uncalculated risks [. . .] (Sole Director).

Strategic internationalization decisions are taken together by the members of the controlling family. However, the interview testifies a clear separation in the entrepreneurial vision between the second and the third generations. He and his wife (second generation), who directly manage the company (the operations phases), have a conservative vision related to the status quo and are against changes, whereas the third generation (in particular his son) has a dynamic, more proactive, and aggressive vision on the growth and development of the FB.

[. . .] very often the dialectic associated with major company decisions is animated [. . .] a continuous clash characterizes decisions, especially as concerns internationalization [. . .] I often oppose my son's investment proposals related to internationalization [. . .] (Sole Director).

There is a conflict between generations that have different entrepreneurial visions: the importance of a system of family values in the farming tradition on the one hand, and the dynamism and entrepreneurial innovation of the third generation on the other hand. Therefore, there are conflicts in decision-making, which in the end are solved in the logic of family cohesion and of what is best for the family and the company (altruism).

[. . .] though sometimes we have discussions in the end our common objective is our company's soundness [. . .] (Sole Director).

The central figures of the company are the interviewee and his son who represent two conflicting generations. The interviewee has great respect for his son's work and seems to indicate that he greatly esteems him especially because of his competence. Even if often in disagreement, the interviewee seems to have a strong fiduciary relationship with his son especially because of his capabilities (competence-based trust). Two leadership

styles that are different but at the same time based on shared values and a system of reciprocal relations which are core characteristics of this FB.

Company D

Company D was formed in 1988 and rapidly became a consolidated partner of important international pharmaceutical companies for machinery and equipment. The company operates, with its divisions, in the automotive, pharmaceutical, glass, and coils manipulation in deeply internationalized market and offices in China and the United States.

The founder has two brothers who are not involved in his business. The majority stake in the company is held by the interviewee's wife. The company is not a true FB but is a founder-managed firm, though it has a family connotation in that there is the desire of "passing the baton" to the next generation (his children).

[. . .] currently there are no other family members in the management of the business even though my wife holds the majority stake in the company [. . .] however without my family I would not have been able to build my company [. . .] (CEO).

The founder has a long-term vision for his company and with reference to the future involvement of his children, he comments

[. . .] I hope that tomorrow my children will be able to be part of my company [. . .] however they might not be interested [. . .] or capable [. . .], being an entrepreneur stems from passion not from the desire of the money [. . .] I would like my children to learn the culture of putting themselves to the test and risk, always pursuing ethics in behaviour and decisions [. . .] (CEO).

The company is greatly professionalized. There are outside managers and qualified personnel, and the CEO comes from outside the controlling family. This testifies the great autonomy of the business system and the family system.

[. . .] I could easily be replaced [. . .] my main objective is to make the company autonomous from me [. . .] (CEO).

The company boasts direct exports amounting to 70.0 percent of total revenues. The internationalization process commenced in 2000 mainly in Europe.

[. . .] internationalization is an opportunity, a consequence of business development [. . .] however, it is important to perceive the specific risks connected to this strategic decision [. . .] internationalization may occur in various ways [. . .] considering the peculiar nature of my activities I do not see any feasible ways of pursuing delocalization of production [. . .] (CEO).

Among the main perceived risks related to international activities, the interviewee cites: “country risk,” “obsolescence,” “insufficient support from government authorities,” and “difficult access to financing.”

Different phases may be identified in the company’s internationalization process. In the first 10 years, the company was mainly focused on the domestic market (*consolidation of the organizational structure*). At the end of the 1990s, a sizable order from a foreign customer (passive exporting) marked the beginning of the internationalization process. This event enabled the entrepreneur to become aware of the strategic relevance that an orientation to foreign markets could have on the future of the business. At this point, an internationalization strategy was defined and implemented (an external manager with documented marketing experience was hired). In this phase, numerous direct exports were made in Europe and North America. Another important phase in the internationalization process (mergers and acquisitions) occurred in 2006, with an acquisition in China and Latin America. The main persons involved in the decision-making process related to the business’ internationalization are the founder and the marketing director. If there are conflicts in the different ideas on the internationalization processes, these are solved with dialogue and serene confrontations. Perhaps, it is this high degree of professionalism that enabled the company to evolve from local to large international player. Moreover, in the company, there is a system of shared “relational norms” and trust of the founder (as recognized by the interviewee) that are fundamental strategic levers.

Discussion and Main Findings

The globalization of markets and business activities involves all types of companies without exceptions: small, medium, and large; local and multinationals; family and nonfamily. Therefore, FBs are also increasingly considering the opportunities offered by growth in international markets as an element of continuity and development for future generations. In certain cases, internationalization is the only possible alternative for many family companies that are having difficulties in domestic markets (Casillas and Acedo 2005).

Three theoretical propositions are formulated drawing from international entrepreneurship literature (Oviatt and McDougall 2005) and stewardship theory (Davis, Schoorman, and Donaldson 1997), and we investigate the history, the international dynamics, and the relative decision-making processes in four Italian FBs. New generations’ involvement, positively mediated by altruism and competence-based trust, impacts the internationalization decisions in the analyzed FBs.

As concerns the internationalization process, in three of the four cases (Company A, Company C, and Company D), a pattern emerges that represents a clear strategic decision: first, consolidation on the domestic market and subsequently international expansion according to different timing and means (*incremental internationalization*). There are different specific modes with which the companies approach foreign markets: the first approach is through passive exporting (it is the customer who directly requests the product) in the case of Company A followed by other internationalization strategies in subsequent years; international activities that commence right from the establishment of the company in the case of Company B; through agents, foreign distribution agreements, and direct exporting in Company C; and direct exporting, joint ventures, acquisition of business branches located outside Italy from foreign companies, and delocalization of production for Company D. To understand the main drivers that influence the internationalization decision, the following internationalization modes are identified: (a) internal proactive; (b) external proactive; and (c) reactive. Moreover, we identify the changes in the internationalization behavior as the life cycle of the FB. Considering the first approach toward the international market, companies

Table 2
Evolution in the Internationalization Conduct of the FB^a

Company	Internal Proactive	External Proactive	Reactive
Company A	Already implemented		Early stage
Company B	Already implemented	Early stage	
Company C	Already implemented		Early stage
Company D	Already implemented	Early stage	

^aFB, family business.
Source: own elaboration.

can be classified as follows: in the second category (b), Company B and Company D; in the third (c), Company A and Company C (Table 2). Considering current behavior, all companies can also be classified in category “a.”

Whereas in Company B and Company D, internationalization was mainly driven by external stimuli (external proactive), Company A and Company C were initially mostly reactive and their concrete actions only occurred after specific requests from foreign customers (passive exporting). Currently, all four cases present internationalization modes influenced by a proactive approach from within the company. In the rest of the article, the results of the case study analysis are discussed with relation to the three propositions formulated in this article.

Internationalization and Generational Involvement

A different degree of new generation involvement in the business emerges in our case studies. The main evidence in Company B suggests that despite the fact that the company, to some extent, was already partly internationalized at the time of establishment, the most significant changes in terms of impact on and actual development of international strategies occurred only after the new generation entered the business. In this case, the new generation’s knowledge, competences, and enthusiasm made a decisive contribution to the FB’s internationalization. A crucial milestone in the internationalization of this FB is the time in which there is an overlap in between the former generation and the incoming generation. For the internationalization of the business to be implemented, three factors must occur simultaneously: (1) the company is in its maturity phase;

(2) the generation which is in command (*former*) is slowly losing the strategic helm of the company; and (3) a strong drive for change and growth orientation in the new generation (*incoming*). These three factors are present at the same time in Company A, Company B, and Company C. In all three cases, strong growth in international markets is achieved thanks to the fact that the new generation has taken on a leadership position. Company D does not fall into this category because it is more of a *founder-managed firm* than an FB *stricto sensu*, even though the founder expressed his desire to “pass the baton” to the future generation (his children). Despite the fact this company revolves around the figure of the founder, there are managers from outside the family and this makes it a very interesting case. The founder has a centralized guidance of his company. Competences, capabilities, and outside manager are the key words. It does not matter if he will not be able to “pass the baton” to the new generation as long as the company survives. In our view, this stems from the particular sector in which the company operates: the high-tech sector, which requires continuous know-how development.

One of the important contributions that this study aims to provide on the internationalization of FBs is to consider new generation involvement as a unique and fundamental “episode” in the life cycle of an FB. We are aware that in order to have the contribution of new generations, the family and the business systems must develop a generational transfer culture. Though with different intensity, in three cases (Company A, Company B, and Company C) new generation involvement in the business has led to satisfactory results in terms of new product and service development

for foreign customers, imports from abroad, penetration of new international markets, establishment of sales structures abroad, and partnerships with international counterparties; therefore, proposition 1—on the importance of the new generations' involvement in the business for international strategies—is supported by the evidence that emerges from the case studies.

On the basis of specific characteristics investigated in the interviews and through the analysis of secondary data, the four FBs may be classified in the following different categories: (1) *conflict-driven and incremental internationalization* (Company A); (2) *born global FB* (Company B); (3) *direct exporter* (Company C); and (4) *international founder-managed FB* (Company D).

The Role of Altruism and Trust

As to the positive mediating role of altruism, from three cases (Company A, Company B, and Company C) it is clear that altruism plays an important role in conflict management and in the mitigation of perceived internationalization risk (Zahra 2003), therefore positively mediating the contribution of new generations' involvement to the level of international activities (proposition 2 supported).

In Company A, the need to create a stable and lasting family and business system for the children and the presence of trust-based relationship between the founder and the new generation, essentially based on the latter's competences (*competence-based trust*), determine the climate which is used in the management and resolution of conflicts connected to important internationalization decisions. In this case, competence-based trust between the founder and the new generation creates an informal governance mechanism to solve the conflicts related to the future of the FB. In fact, there are diverging views on strategic internationalization decisions, different perceived risk levels, and diverse competence levels. However, even if these conflicts are often significant, they have always been solved spontaneously without any negative effect. Therefore, competence-based trust mitigates the level of cognitive conflict arising from the new generation's involvement in the internationalization decisions.

In Company B, altruism and trust seem to be the key elements that play an important role in the decision-making process, even if this is the

only case in which there is a board of directors as a formal governance system for strategic decisions. Moreover, the presence of relational norms, of a shared set of values, and long-term vision positively influences altruistic behavior in the FB. In this case, even though the founder is the main decision-maker, there is a participated decision-making process in which other family members contribute and the presence of a board ensures that company decisions may in any case and always be made even should conflicts between different generations occur.

Conflicts associated to the internationalization process also characterize Company C. Indeed, there is intergeneration conflict on the future development of the FB. Tradition and new ideas on the future of the company clash. However, also in this case, conflicts seem to be managed by the presence of altruistic behavior and competence-based trust between the new generation (incoming) and the former generation that operate together in the business (even if with different roles and responsibilities).

In Company C, the founder/owner is the only person involved in the decision-making process even if he is sided by a team of professionals outside the family for the most important strategic decisions. High entrepreneurial orientation and success stories influence his fiduciary relation with the entire organization. However, even though the new generation is not involved in the business, there is a strong intention to pass on the company to the new generation. This case is somewhat different as it is an FB in the first phase of its life cycle that, however, already displays a high degree of management involvement. This is mainly due to specific characteristics of the company's sector. Based on the evidence that emerged in the four cases, though with diverse intensity, the presence of altruism positively mediates the contribution of new generation's involvement to the level of international activities (proposition 2 is supported).

The other theoretical proposition refers to competence-based trust in the relation between the new generation and the founder (senior generation). A trust-based relationship based on the competences of the new generations is mainly found in Company A and Company D. Actually, in both cases, the new generation is respected by the senior (Company A) and by the other actors involved in the company (Company D) because of their competences

and skills. In these two cases, their high technological content determines a series of peculiarities of these FBs. Nonetheless, the founder's leadership is complemented by a participated decision-making system, which involves the new generation (Company A). Therefore, this suggests that if there is competence-based trust between the new generation and the senior in an FB, it positively mediated the contribution of the new generation to the level of internationalization (proposition 3 is supported).

Conclusions and Future Research Directions

This paper makes several contributions to the academic debate and the practice on family firms' internationalization. First, we add to the FB literature by showing how international entrepreneurship literature may shed new light to the understanding of new generations' involvement as a particular "episode" that can lead to an "era" of rapid and dedicated internationalization of the FB. Moreover, by formulating and discussing propositions on the role of altruism and trust in relation to FBs' internationalization, we respond to Zahra's (2003) call for more studies using stewardship theory as the main lens of analysis for FBs' international behaviors. Hence, stewardship theory assumptions may help explain divergent views on FBs' internationalization and answer to the following question: why are some FBs stagnant whereas others are entrepreneurial? Second, results from the qualitative analysis show that different international behaviors exist within the analyzed FBs and that altruism and competence-based trust are important to take into account in order to understand how the new generation contributes to the level of international activities. Stemming from the main evidence arising from the four cases, we have identified four typologies of internationalization: the conflicting internationalization (Company A); the born global FB (Company B); the direct exporter (Company C); and the international founder-managed FB (Company D).

These explanatory patterns for FBs' internationalization are derived by using different sources (literature, documents analysis, and semi-structured interviews). Finally, this study has also practical implications. The main results give interesting perspective to FBs' owners by highlighting the need to ensure that multiple generations understand the business. Indeed,

this understanding prepares family members to share the risks associated with the decision to internationalize the business (and the family) while enabling them to contribute in a meaningful way to it. Furthermore, FBs can better understand the factors that may spur their international commitment, handling them properly.

References

- Andersson, S. (2000). "The Internationalization of the Firm from an Entrepreneurial Perspective," *International Studies of Management and Organization* 30(1), 63–92.
- Astrachan, J. H., and M. C. Shanker (2003). "Family Businesses' Contribution to the U.S. Economy: A Closer Look," *Family Business Review* 16(3), 211–219.
- Autio, E., H. Sapienza, and J. Almeida (2000). "Effects of Age at Entry, Knowledge Intensity and Imitability on International Growth," *Academy of Management Journal* 43, 909–924.
- Becker, G. (1981). *A Treatise on the Family*. Cambridge, MA: Harvard University Press.
- Bell, J., R. McNaughton, and S. Young (2001). "Born-Again Global Firms: An Extension to the Born Global Phenomenon," *Journal of International Management* 7(3), 173–189.
- Berrone, P., C. Cruz, and L. R. Gomez-Mejia (2012). "Socioemotional Wealth in Family Firms: Theoretical Dimensions, Assessment Approaches, and Agenda for Future Research," *Family Business Review* 25(3), 258–279.
- Bloodgood, J. M., H. J. Sapienza, and J. G. Almeida (1996). "The Internationalization of New High-Potential U.S. Ventures: Antecedents and Outcomes," *Entrepreneurship Theory and Practice* 20, 61–76.
- Butler, J. K. (1991). "Toward Understanding and Measuring Conditions of Trust: Evolution of a Conditions of Trust Inventory," *Journal of Management* 17(3), 643–663.
- Cabrera-Suárez, K., D. Saá-Pérez, and D. García-Almeida (2001). "The Succession Process from a Resource- and Knowledge-Based View of the Family firm," *Family Business Review* 14, 37–47.
- Calabrò, A., and D. Mussolino (2013). "How Do Boards of Directors Contribute to Family SME Export Intensity? The Role of Formal and Informal Governance Mechanisms," *Journal of Management and Governance* 17(2), 363–403.

- Casillas, J. C., and F. J. Acedo (2005). "Internationalisation of Spanish Family SMEs: An Analysis of Family Involvement," *International Journal of Globalisation and Small Business* 1(2), 134–151.
- Cerrato, D., and M. Piva (2012). "The Internationalization of Small and Medium-Sized Enterprises: The Effect of Family Management, Human Capital and Foreign Ownership," *Journal of Management & Governance* 16(4), 617–644.
- Chua, J. H., J. J. Chrisman, and P. Sharma (1999). "Defining the Family Business by Behaviour," *Entrepreneurship Theory and Practice* 23(4), 19–39.
- Claver, E., L. Rienda, and D. Quer (2009). "Family Firms' International Commitment: The Influence of Family-Related Factors," *Family Business Review* 22(2), 125–135.
- Corbetta, G., and C. Salvato (2004). "The Board of Directors in Family Firms: One Size Fits All?," *Family Business Review* 17(2), 119–134.
- Daily, C. M., and M. J. Dollinger (1992). "An Empirical Examination of Ownership Structure in Family and Personally Managed Firms," *Family Business Review* 5(2), 117–136.
- Davis, J. H., F. D. Schoorman, and L. Donaldson (1997). "Toward a Stewardship Theory of Management," *Academy of Management Review* 22(1), 20–47.
- Eddleston, K., and F. W. Kellermanns (2007). "Destructive and Productive Family Relationships: A Stewardship Theory Perspective," *Journal of Business Venturing* 22(4), 545–565.
- Eddleston, K. A., J. J. Chrisman, L. P. Steier, and J. H. Chua (2010). "Governance and Trust in Family Firms: An Introduction," *Entrepreneurship Theory and Practice* 34(6), 1043–1056.
- Eisenhardt, K. (1989). "Building Theories from Case Study Research," *Academy of Management Review* 14(4), 532–550.
- Fernández, Z., and M. J. Nieto (2005). "Internationalisation Strategy of Small and Medium-sized Family Businesses: Some Influential Factors," *Family Business Review* 18(1), 77–89.
- Fiske, S. T., A. J. C. Cuddy, and P. Glick (2007). "Universal Dimensions of Social Cognition: Warmth and Competence," *Trends in Cognitive Sciences* 11, 77–83.
- Gallo, M. A., and C. G. Pont (1996). "Important Factors in Family Business Internationalisation," *Family Business Review* 9(1), 45–59.
- Gallo, M. A., and J. Sveen (1991). "Internationalizing the Family Business: Facilitating and Restraining Factors," *Family Business Review* 4(2), 181–190.
- Graves, C., and J. Thomas (2006). "Internationalisation of Australian Family Businesses: A Managerial Capabilities Perspective," *Family Business Review* 19(3), 207–224.
- Huse, M. (2007). *Boards, Governance and Value Creation: The Human Side of Corporate Governance*. Cambridge: Cambridge University Press.
- James, H. S. (1999). "Owner as Manager, Extended Horizons and the Family Firm," *International Journal of Economics of Business* 6(1), 41–55.
- Kellermanns, F. W., and K. Eddleston (2004). "Feuding Families: When Conflict Does a Family Firm Good," *Entrepreneurship Theory and Practice* 28(3), 209–228.
- Kets de Vries, M. (1993). "The Dynamics of Family Controlled Firms: The Good and Bad News," *Organizational Dynamics* 21(3), 59–71.
- Knight, G. A., and S. T. Cavusgil (2004). "Innovation, Organizational Capabilities, and the Born-Global Firm," *Journal of International Business Studies* 35(2), 124–141.
- Lansberg, I. (1999). *Succeeding Generations: Realizing the Dream of Families in Business*. Boston: Harvard Business School Press.
- Littunen, H., and K. Hyrsky (2000) "The Early Entrepreneurial Stage in Finnish Family and Nonfamily Firms," *Family Business Review* 13(1), 41–54.
- Litz, R. A. (1995). "The Family Business: Toward Definitional Clarity," *Family Business Review* 8(2), 71–81.
- Lu, J., and P. Beamish (2001). "The Internationalisation and Performance of SMEs," *Strategic Management Journal* 22(6–7), 565–586.
- Lubatkin, M. H., W. Schulze, Y. Ling, and R. Dino (2005). "The Effects of Parental Altruism on the Governance of Family-Managed Firms," *Journal of Organizational Behaviour* 26, 313–330.
- Lubatkin, M. H., R. Durand, and Y. Ling (2007). "The Missing Lens in Family Firm Governance Theory: A Self-Other Typology of

- Parental Altruism,” *Journal of Business Research* 60, 1022–1029.
- Mayer, R. C., J. H. Davis, and F. D. Schoorman (1995). “An Integrative Model of Organizational Trust,” *Academy of Management Review* 20(3), 709–734.
- Naldi, L., M. Nordqvist, K. Sjöberg, and J. Wiklund (2007). “Entrepreneurial Orientation, Risk Taking, and Performance in Family Firms,” *Family Business Review* 20(1), 33–47.
- Neubauer, F. F., and A. G. Lank (1998) *The Family Business: Its Governance for Sustainability*. London: MacMillan Business.
- Oviatt, B. M., and P. P. McDougall (2005). “Defining International Entrepreneurship and Modelling the Speed of Internationalization,” *Entrepreneurship Theory and Practice* 29(5), 537–553.
- Pukall, T. J., and A. Calabrò (2014). “The Internationalization of Family Firms: A Critical Review and Integrative Model,” *Family Business Review* 27(2), 103–125.
- Rempel, J. K., J. G. Holmes, and M. P. Zanna (1985). “Trust in Close Relationships,” *Journal of Personality and Social Psychology* 49, 95–112.
- Rialp, A., J. Rialp, and G. A. Knight (2005). “The Phenomenon of Early Internationalizing Firms: What Do We Know after a Decade (1993–2003) of Scientific Inquiry?,” *International Business Review* 14(2), 147–166.
- Salvato, C. (2004). “Predictors of Entrepreneurship in Family Firms,” *Journal of Private Equity* 7(3), 68–76.
- Schulze, W. S., M. H. Lubatkin, R. N. Dino, and A. K. Buchholtz (2001). “Agency Relationships in Family Firms: Theory and Evidence,” *Organization Science* 12, 99–116.
- Sciascia, S., P. Mazzola, J. H. Astrachan, and T. M. Pieper (2012). “The Role of Family Ownership in International Entrepreneurship: Exploring Nonlinear Effects,” *Small Business Economics* 38(1), 15–31.
- Segaro, E. (2010). “Internationalization of Family SMEs: The Impact of Ownership, Governance, and Top Management Team,” *Journal of Management & Governance* 14, 1–23.
- Sharma, P., and S. A. Zahra (2004). “Family Business Research: A Strategic Reflection,” *Family Business Review* 17(4), 331–346.
- Sharma, P., J. J. Chrisman, and J. H. Chua (1997). “Strategic Management of the Family Business: Past Research and Future Challenges,” *Family Business Review* 10(1), 1–36.
- Westhead, P., and M. Cowling (1998). “Family Firm Research: The Need for a Methodological Rethink,” *Entrepreneurship Theory and Practice* 23(1), 31–56.
- Westhead, P., M. Wright, and D. Ucbasaran (2002). “International Market Selection Strategies Selected by ‘Micro’ and ‘Small’ Firms,” *Omega* 30, 51–68.
- Westphal, J. D. (1999). “Collaboration in the Boardroom: Behavioural and Performance Consequences of CEO-board Social Ties,” *Academy of Management Journal* 42(1), 7–24.
- Yin, R. K. (2003). *Case Study Research: Design and Methods*. Thousand Oaks CA: Sage.
- Zahra, S. A. (2003). “International Expansion of U.S. Manufacturing Family Businesses: the Effect of Ownership and Involvement,” *Journal of Business Venturing* 18(4), 495–512.
- (2005). “A Theory of International New Ventures: A Decade of Research,” *Journal of International Business Studies* 36(1), 20–28.
- Zahra, S. A., and G. George (2002). “Absorptive Capacity: A Review, Reconceptualization and Extension,” *Academy of Management Review* 27(2), 185–203.
- Zahra, S. A., J. C. Hayton, D. O. Neubaum, C. Dibrell, and J. Craig (2008). “Culture of Family Commitment and Strategic Flexibility: The Moderating Effect of Stewardship,” *Entrepreneurship Theory and Practice* 32(6), 1035–1054.
- Zucchella, A., G. Denicolai, and S. Denicolai (2007). “The Drivers of the Early Internationalization of the Firm,” *Journal of World Business* 42(3), 268–280.

Firm Growth in Family Businesses—The Role of Entrepreneurial Orientation and the Entrepreneurial Activity*

by Pekka Stenholm, Tommi Pukkinen, and Jarna Heinonen

Previous studies show that growth is an important goal for businesses, but little is known of how the entrepreneurial orientation–performance relationship works in family businesses and how this differs from their nonfamily peers. We examine that and how entrepreneurial activity mediates the relationship in family and nonfamily businesses. Our results on 532 firms show that family businesses benefit from innovative orientation, which is both directly and indirectly associated with firm growth via entrepreneurial activity. This association does not exist in nonfamily businesses. Furthermore, risk taking does not influence family business growth even if it does in nonfamily businesses.

Introduction

From the family business perspective, firm growth is regarded as a reflection of success and particularly as a source of continuity and transgenerational wealth creation. However, the pursuit of growth does not happen in a vacuum, but is affected by dynamism, uncertainty, and unpredictable changes in the markets (Craig and Moores 2006). In order to perform in the competitive arena, family businesses need to align their behavior with the uncertain and complex environment they operate in (Sciascia, Naldi, and Hunter 2006). This requires they adopt an entrepreneurial mindset for decision-making (Covin and Slevin

1991; Wiklund 1999). Furthermore, it highlights the importance of investigating the role of entrepreneurial orientation (EO) (comprising innovation, proactivity, and risk-taking orientation) in family businesses and its association with a firm's growth.

The *EO–performance* relationship is relevant and widely studied both in family and nonfamily businesses. Previous studies suggest some differences between family and nonfamily businesses, particularly when EO is measured as a multidimensional construct. If the results have indicated that family businesses lag behind their nonfamily peers, it has been explained by the family dynamics and factors such as traditions, values, and customs,

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which may have weakened the entrepreneurial mindset in family businesses (Craig and Lindsay 2002; Short et al. 2009; Zahra 2005). However, the previous research also suggests that family businesses may emphasize and benefit from EO because of generational changes in the ownership of family businesses (Cruz and Nordqvist 2012) or owing to the demands of environmental dynamism (Casillas, Moreno, and Barbero 2011). These findings are, however, not comprehensive and there is a need for a more fine-tuned understanding of the mechanisms that influence the association between EO and firm growth in family and nonfamily businesses.

In this study, EO is considered a mindset: an indication of an intention. Therefore, some activities are necessary to exploit the potential embedded in EO in order to reach the desired outcomes. Lumpkin and Dess (1996) suggested that integrating activities intervene the initial relationship between EO and performance. In this study, we assume that entrepreneurial activity (EA), defined as a firm's behavior focusing on exploring and exploiting new opportunities, is such an activity. In assessing EA, we rely on discovery theory, according to which, opportunities exist independent of entrepreneurs, and their exploration is the key to their exploitation (Alvarez and Barney 2007). Working from these assumptions, we investigate the mechanism of the EO–performance relationship in family and nonfamily businesses. The comparative setting allows us to analyze whether this mechanism is different in family and nonfamily businesses (see Dess, Pinkham, and Yang 2011).

Our findings support earlier studies that have identified some differences between family and nonfamily businesses with regard to the dimensions of the EO construct and their relationship with business growth. Furthermore, our study introduces the concept of EA as a mediating factor of the studied relationships and thus extends the literature by addressing the activities linking EO and firm growth. This is particularly relevant as previous studies on entrepreneurship orientation in family businesses have not tackled the mediating activities influencing firm growth (Miller and Le Breton-Miller 2011) but have instead concentrated on the “driving force behind the organizational pursuit of entrepreneurial activities” (Covin and Wales 2012, p. 1). Finally, our study contributes by offering empirical evi-

dence on the differences in the mechanism of the EO–performance relationship between family and nonfamily businesses. We argue that the orientation toward innovation and renewal is an efficient way for family businesses to adapt to and exploit the opportunities of the external business environment in order to achieve firm growth. In nonfamily businesses, this association does not exist, but instead, for them the risk-taking orientation seems to generate a similar mechanism.

The article proceeds as follows. First, we examine the theoretical perspectives and our hypotheses. Then, we discuss the results and illustrate their theoretical and managerial implications. Finally, we conclude the study and discuss its limitations.

Firm Growth and EO in Family Businesses

Explaining firm growth has been one of the great challenges in entrepreneurship research. Firm growth can be assessed as an outcome of organizational development (Chan, Bhargava, and Street 2006) that is often affected by the internal and external contexts in which the firm's growth is investigated.

In this study, we focus on EO as a mindset in order to investigate firm growth. EO comprises a firm's strategic orientation and its decision-making styles, and is a reflection of how a firm operates (Lumpkin and Dess 1996). According to Miller (1983), EO is about engaging in product innovations, proactive behavior, and taking risks. Accordingly, it is characterized by intentions strongly linked to growth (Covin and Slevin 1989; Moreno and Casillas 2008; Wiklund and Shepherd 2005).

The concept of EO has been employed in studying family business growth (Casillas, Moreno, and Barbero 2010, 2011; Naldi et al. 2007). Previous research suggests a positive association between the EO of family businesses and the growth in businesses owned by the second or subsequent generations (Casillas, Moreno, and Barbero 2010). Although the EO–performance relationship is well established (Lumpkin and Dess 2001; Rauch et al. 2004), this stream of research in family businesses is still rare. Therefore, there is a need to study EO in family businesses as a multidimensional construct to capture the potential independence among the dimensions of EO and how they relate to performance outcomes (Lumpkin and Dess 2001).

There are a number of reasons why the mechanism of the EO–performance relationship may differ in family and nonfamily businesses. In comparison with nonfamily businesses, the entrepreneurial mindset in family businesses is typically determined more by family values (Olson et al. 2003) or long-term financial goals (Astrachan and Jaskiewicz 2008). Furthermore, the role of EO may vary in relation to the emphasis placed on business, family, money, or lifestyle (Basu 2004). Previous research suggests that family businesses value long-term relationships (Carney 2005) and identifying their brands with the family (Craig, Dibrell, and Davis 2008) more than nonfamily businesses. These perspectives seem to reduce the propensity for inventing, pioneering, and creating something new by which to create wealth, even if these activities are prerequisites for securing the market share, customer relationships, the best employees, and the firm's assets (Hamel 2000). Carney (2005) emphasized that characteristics of family firm governance, such as parsimony, may lead to cost advantages and enhance entrepreneurial investments. All these suggest differences between family and nonfamily businesses in EO and particularly in the mechanism of the EO–performance relationship. Next, we consider three dimensions of EO and their impact on firm growth in family and nonfamily businesses.

Innovative Orientation

Previous results show that innovative orientation, and especially action generating new product innovations, enhances the performance and growth of firms (Cho and Pucik 2005; Stenholm 2011; Subramanian and Nilakanta 1996; Swierczek and Ha 2003). Nevertheless, family businesses have been criticized for being unwilling to innovate (Daily and Dollinger 1991), and nonfamily businesses are seen as more innovative (Gomez-Meija, Larraza-Kintana, and Makri 2003). However, recent results from studies of family businesses performing well suggest that family businesses do innovate (Zahra 2005) and that their innovativeness positively influences their performance (Casillas, Moreno, and Barbero 2010). Innovative orientation is one indication of organizational capability building that stimulates action in response to changes in the market (Sandvik and Sandvik 2003). Thus, a family business also needs the capability for renewal,

for innovative orientation, and the capacity to adapt to changes in the market (Craig and Moores 2006). However, the role of innovation varies in relation to the strategies followed in family businesses (McCann, Leon-Guerrero, and Haley 2001). In terms of innovative orientation, the potential in family businesses is embedded in their capability for rapid decision-making and flexibility, both of which may boost their innovative orientation (Miller and Le Breton-Miller 2005; Naldi et al. 2007). Hence, we assume that innovative orientation is positively associated with firm growth in family businesses in a similar way as it is in nonfamily businesses. Thus, we propose the following hypothesis.

H1: Innovative orientation is positively associated with firm growth both in family and nonfamily businesses.

Proactive Orientation

A firm's proactive orientation has been shown to be positively associated with that firm's performance (Lumpkin and Dess 2001; Swierczek and Ha 2003). However, previous results indicate that in family businesses, this kind of posture or ownership status does not affect firm growth (Daily and Thompson 1994) and that family businesses can be expected to behave in a less proactive way than their nonfamily peers (Short et al. 2009). Naldi et al. (2007) also found that proactive orientation is not associated with family business performance. Aiming to secure a continuity of business and ownership over several generations may require family business managers and owners to be proactive in influencing environmental changes to direct the future of the firm successfully (Bateman and Crant 1993). Pittino and Visintin (2009) found that the prospector strategy is less favored among family businesses led by the second or further generations. This also supports the findings of McCann, Leon-Guerrero, and Haley (2001) on the greater prevalence of prospector strategies among smaller and younger family businesses. These results suggest that longer family tenure hinders the proactive orientation of a family business. In general, however, the proactive orientation of the management of small businesses has been shown to have a positive relationship with firm performance (Becherer and Maurer 1999). More recently, scholars have proposed that the long-term orientation of a

family business could actually be positively associated with its proactivity (Lumpkin, Brigham, and Moss 2010). Similarly, the centralized structure of family businesses and their combined ownership and management are said to promote proactive behavior in those businesses (Salvato 2004). Such proactive orientation may even increase in second-generation family businesses (Casillas, Moreno, and Barbero 2010). Consequently, we assume that proactive orientation is positively associated with firm growth in family and nonfamily businesses. Thus, we propose the following hypothesis.

H2: Proactive orientation is positively associated with firm growth both in family and nonfamily businesses.

Risk-Taking Orientation

Being innovative and proactive raises the issue of taking risks. In addition to the time and resources involved in launching new products for new markets, an unknown level of demand increases the perception of risk (Naldi et al. 2007; Thompson 1999). Earlier research suggests a positive relationship between risk taking and firm performance (Rauch et al. 2004, 2009). However, this might not be the case in family businesses, perhaps because of family governance or the high concentration of ownership (Chandler 1990). Casillas, Moreno, and Barbero (2010) found that risk taking is not associated with family business growth, whereas Naldi et al. (2007) found that risk taking is prevalent, but negatively related to performance in family businesses. According to Zahra (2005), this is a result of long periods of control by the founder/chief executive officer (CEO), even if the relationship between family involvement and risk taking might normally be expected to be a positive one. These findings suggest that the relationship between risk taking and firm growth might differ between family and nonfamily businesses.

Still, risk taking may well be a prerequisite for the creation and securing of family wealth (Rogoff and Heck 2003). Gudmundson, Hartman, and Tower (1999) also found that family businesses have less orientation to pursue market leadership than nonfamily businesses. Following traditional routes may not offer appropriate solutions to challenges arising from the ongoing changes and varying levels of

uncertainty in the market (Habbershon and Pistrui 2002; Thompson 1999). Even worse, failure to update strategies and opposing their renewal may harm the continuity of family businesses. Thus, despite some conflicting findings in relation to risk taking in family businesses, we assume that risk taking is negatively associated with growth among family businesses. Additionally, we assume that in nonfamily businesses, risk taking is positively associated with firm growth. Therefore, we propose the following hypothesis.

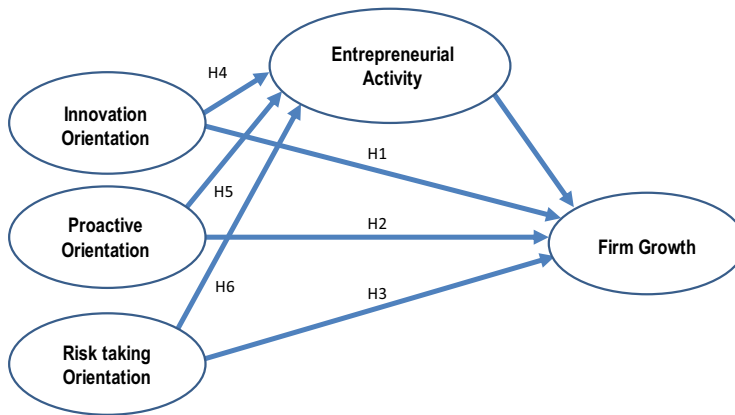
H3: Risk taking orientation is positively associated with firm growth in nonfamily businesses and negatively associated in family businesses.

EA as a Mediator

EO is an indication of a strategic intention only (Covin and Wales 2012; Wiklund 1999), and some behavior bridging the gap between initial intentions and their outcomes is required to achieve the intended outcomes (Lumpkin and Dess 1996). In this study, we suggest that the EA at firm level is a potential mediator in the EO–performance relationship. EA as used in the current research refers to a firm’s behavior that is focused on exploring and exploiting new business opportunities (Ardichvili, Cardozo, and Ray 2003; Shane and Venkataram 2000; Venkataram 1997).

Under volatile circumstances, exploring and exploiting opportunities will help businesses to gain competitive advantage and maintain wealth (Ireland, Hitt, and Sirmon 2003; Sirmon and Hitt 2003). Firm-level EA has been found to play an important role in firm performance, including firm growth. As noted by Baum, Locke, and Smith (2001), recognizing new opportunities and generating competitive strategies to exploit them are decisive for firm growth. Results from new ventures show that even the discovery of new opportunities relates positively to firm growth and performance (Puhakka 2007). Further, Levinthal and March (1993) emphasized that opportunity exploration is an important antecedent to pursuing persistent success and so to ensuring the future viability of any firm. This highlights the importance of EA in the family business too, as family businesses often emphasize their longevity over generations. Interestingly, family businesses are acknowledged to underscore traditions and customs (Craig and Lindsay 2002; Zahra 2005), which

Figure 1
Hypothesized conceptual model



may inhibit their engagement in EA (Zahra, Hayton, and Salvato 2004). These contradictory conjectures suggest that it is necessary to investigate the role of EA in the EO–performance relationship further. Kollmann and Stockmann’s (2014) findings support this: different dimensions of EO are associated with a firm’s explorative activities.

We believe that there are important reasons why EA may support firm growth. Among them, two seem particularly compelling. First, firms behaving entrepreneurially are likely to survive relatively longer. Owner–managers are aware that their businesses’ survival is dependent on their ability to utilize new opportunities and improve on their current behavior (Ward 1987). Second, EA may enable businesses to “change the rules of the game” (Luksha 2008) through exploiting new opportunities. These imply that EA would mediate the relationship between each of the three dimensions of EO and firm growth in both family and nonfamily businesses. On the basis of this reasoning, we offer the following hypotheses.

H4: The association between innovative orientation and firm growth is mediated by EA both in family and nonfamily businesses.

H5: The association between proactive orientation and firm growth is mediated by EA both in family and nonfamily businesses.

H6: The association between risk-taking orientation and firm growth is mediated by EA both in family and nonfamily businesses.

Our hypothesized conceptual model is presented in Figure 1.

Methods

Sample and Data

We used survey data to test our hypotheses. The data were collected from Finnish firms operating in the food industry (European industry standard classification system, NACE, code 10–11), the media (NACE 18, 58–61), and the shipbuilding cluster, including ship building (NACE 301) and any subcontracting sectors (furnishing, maintenance, etc.). By using stratified sampling on the official Business Register of *Statistics Finland*, a sample of 2,227 firms was selected for the data collection. The data were collected through computer-aided telephone interviews in late spring, 2009. The survey was answered by the CEO or owner–manager of the firm. Contacting 2,227 firms resulted in a total of 532 responses and a response rate of 24 percent. Chi-square tests were used to assess the nonresponse bias. The analysis covered the size of the 532 firms that responded and the firms that did not participate in the survey. The size distribution of participating firms was slightly, but nonlinearly, skewed toward larger firms, which is a relatively typical outcome in such surveys.

Defining the Family Business. We acknowledge that there is no established definition of a family business, but accept the idea of varying degrees of family involvement (Astrachan, Klein, and Smyrniotis 2002). In our study, we define a family business as a business at least 50 percent owned by a single family (or person), and where the respondent perceives the business to be a family business. If a firm fulfilled both of those two conditions, it was defined as a family business, and firms that did not were considered nonfamily businesses. Based on this, the number of family businesses in the data set was 224 and nonfamily businesses 308.

Measures

Firm Growth

In measuring firm growth, we follow the view that organizational growth is a multidimensional phenomenon (Delmar, Davidsson, and Gartner 2003). Furthermore, we assume that assessing a firm's performance against its competitors provides more insights into performance than an assessment based solely within a firm (Birley and Westhead 1990). Firm growth was analyzed by means of four self-reported measures. In choosing the measures, our starting point was Wiklund and Shepherd (2003), who combined sales and employment growth into the same scale, and Venkatraman (1989) who examined sales growth and market share at the same time. Additionally, we followed Madsen (2007) who added market share together with sales and employment growth onto the same scale. Finally, in order to capture the firm's overall growth performance, we added an item from Zou, Taylor, and Osland (1998) to our scale. As a result, the respondents were asked four statements about the overall growth as well as the growth of their sales, personnel, and market share against that of their competitors (see the Appendix). The scale allows comparisons across industries, as it is not based on absolute results but on how well the firm is performing among its peers in the same industry (Allen and Helms 2006). All the statements were measured on a seven-point Likert scale ranging from 1 = *totally disagree* to 7 = *totally agree*. Construct reliability (CR) for this variable is 0.88.

EO. The measurement of EO was based on a modification of Covin and Slevin's (1989) scale, which is a combination of original and adopted items from Miller and Friesen (1982) and

Khandwalla (1977). On the scale, EO is measured in terms of a firm's tendency toward innovation, being proactive, and risk taking. This approach has been used in several studies (Covin and Slevin 1991; Lumpkin and Dess 2001; Moreno and Casillas 2008; Wiklund and Shepherd 2005). Instead of using original pairs of opposite statements, we asked each respondent to answer statements using a seven-point Likert scale. Furthermore, to measure how proactive the firm was, we adopted Lumpkin and Dess's (2001) approach, but replaced one item related to the firm's dealings with its competitors with an item on top managers' competitive tendencies. The EO scale utilized in the study is presented in the Appendix. The CR for innovation orientation was 0.77, for proactive orientation 0.77, and for risk taking 0.74.

EA. In studying the activities firms undertake in order to discover new opportunities, we selected a relatively broad approach. This was chosen in order to examine how active firms are in exploring and exploiting opportunities existing in the market (Baum, Locke, and Smith 2001) and how this behavior influences the EO-performance relationship. The EA was assessed by means of three subjective items comprising the activities related to opportunity exploration and exploitation in the firm (see Appendix). These items were measured on a Likert scale ranging from 1 = *totally disagree* to 7 = *totally agree*. The CR for this variable was 0.86.

Control Variables. We controlled the analyses for the firm's size, age, environmental dynamism, and ownership structure (see the Appendix). Previous research shows that the size and age of the firm may have an effect on firm growth (Almus and Nerlinger 1999; Dobbs and Hamilton 2007). Hence, the analysis was adjusted with self-reported items measuring the size and age of the firm. Moreover, environmental dynamism has been shown to influence the relationship between EO and firm growth (Casillas, Moreno, and Barbero 2010; Wiklund and Shepherd 2003). Thus, it was controlled for in this study in terms of the industry-level rate of unpredicted change. This was measured by utilizing the techniques used by Hmieleski and Baron (2008) where time was regressed against industry value added, industry turnover, number of industry establishments, number of industry employees, and the market concentra-

Table 1
Descriptive Statistics^a

Variable	Nonfamily Businesses		Family Businesses		All	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
1. Growth	3.51	1.35	3.36	1.45	3.45	1.39
2. EOinno	3.43	1.59	3.49	1.64	3.45	1.61
3. EOpro	4.50	1.24	4.38	1.33	4.45	1.28
4. EOrisk	3.59	1.40	3.52	1.41	3.56	1.40
5. Ent. activity	4.78	1.14	4.73	1.24	4.76	1.18
6. Size_log	1.33	0.74	1.21	0.68	1.28	0.72
7. Age_log	1.25	0.50	1.35	0.36	1.29	0.45
8. Env. dynamism	-1.29	0.76	-1.28	1.22	-1.29	0.97
9. Owners	0.16	0.37	0.75	0.43	0.44	0.50

^aS.D., standard deviation.

Variables 1–5: Seven-point Likert scale ranging from 1 = *totally disagree* to 7 = *totally agree*.

tion (Herfindahl-Hirschman Index) in the industry 1995–2006. Further, ownership structure was controlled for in the analyses because family control has been found to have an effect on firm growth (Anderson and Reeb 2003; Maury 2006). This was controlled by a ratio of the number of family member owners over the total number of owners.

Table 1 provides descriptive statistics for the main variables for family and nonfamily businesses and for the full data set used in our analysis.

Results

Analysis of Common Method Variance

In the case of a cross-sectional self-reported survey with a single respondent, common method variance may hinder interpretation of the relationships between measures (Podsakoff et al. 2003). In this study, common method variance was assessed with Harman's single-factor test. Accordingly, the analyzed items were subjected to exploratory factor analysis, which generated a factor solution comprising four factors (independent latent variables). Whereas one general factor did not account for the majority (40.5 percent) of the variance in the data, the results suggest that common method variance should not substantially affect our results. Next, all the items were loaded on the confirmatory factor analysis (CFA) and we tested different models. The single latent variable model had a poor overall fit ($\chi^2(64) = 1171.12$, $\chi^2/df = 18.02$,

$p < .001$) and also the fit indices (comparative fit index [CFI] = 0.648; root mean square error of approximation [RMSEA] = 0.179; standardized root mean square residual [SRMR] = 0.110) were below the recommended cutoff values (Hair et al. 2010). Thus, the CFA estimates supported the results of the exploratory factor analysis that common method variance does not affect our results.

Assessing the Validity and Reliability

The overall fit and construct validity of our hypothesized model as well as the measurement invariance across the multiple groups (that is, family and nonfamily businesses) were tested with AMOS 19.0 (SPSS Inc., Chicago, IL, USA). Our analysis identified three problematic items with low loadings or strong cross-loadings, which were omitted from the final model (see Appendix). More specifically, we examined item-to-construct correlations within and across constructs, modification indices, and standardized residuals, and as a result we excluded one item from risk-taking orientation and one from EA to improve convergent validity, and also one item from innovation orientation to increase discriminant validity.

Our final model's overall fit, convergent validity, and discriminant validity indicate that the model fits the data and our latent variables are reliable constructs (Table 2). The goodness-of-fit indices ($\chi^2(55) = 122.07$, $\chi^2/df = 2.22$, $p < .001$; CFI = 0.979; RMSEA = 0.048;

Table 2
Measurement Model Summary^a

Construct	Item	Standard Factor Loading	Composite Reliability (CR)	Spearman–Brown (Split-Half Test)	Spearman–Brown ($k = 3$)	Discriminant Validity
EOinno	EOinno2	0.826***	0.770	0.769	0.834	1. EOinno 0.63
	EOinno3	0.756***				2. EOpro 0.35 0.53
	EOpro1	0.769***	0.766	0.800	0.766	3. EOrisk 0.22 0.23 0.58
EOpro	EOpro2	0.561***				4. EA 0.22 0.34 0.13 0.75
	EOpro3	0.822***				5. GROWTH 0.21 0.24 0.15 0.31 0.65
	EOrisk1	0.780***	0.737	0.737	0.808	
EOrisk	EOrisk2	0.748***				
	EA2	0.887***	0.859	0.859	0.901	Off-diagonal: squared construct correlation;
	EA3	0.848***				Along-diagonal (italic): average variance extracted (AVE).
GROWTH	GROWTH1	0.711***	0.879	0.873	0.845	
	GROWTH2	0.857***				
	GROWTH3	0.738***				
	GROWTH4	0.896***				

^aCFI, comparative fit index; GOF, goodness of fit; RMSEA, root mean square error of approximation; SRMR, standardized root mean square residual.

EA = entrepreneurial activity; EOinno = innovation orientation; EOpro = proactive orientation; EOrisk = risk-taking orientation; GROWTH = firm growth; see the listing of items in Appendix.

* $p < .05$

** $p < .01$

*** $p < .001$

GOF statistics: $\chi^2 = 122.065$, $df = 55$, $p < .001$, $\chi^2/df = 2.219$; CFI = 0.979; RMSEA = 0.048; SRMR = 0.032.

SRMR = 0.032) exceed the recommended threshold values. As a first step to estimating convergent validity, all item loadings were examined and found to be significant at the $p < .001$ level and to exceed the threshold value of 0.5 (see Hair et al. 2010). Similarly, all the average variance estimates (AVEs) and the CR estimates were above the respective cutoff values of 0.50 and 0.70, respectively (Hair et al. 2010). The reliability of the two-item scales was estimated further with the Spearman–Brown statistic as suggested by Eisinga, Grotenhuis, and Pelzer (2013). The split-half coefficient was over 0.70 for all the constructs indicating good reliability. In addition, the Spearman–Brown formula was utilized for a “what-if” analysis to determine what the reliability of the two-item scale would be if another similar quality item was added to the scale to create a three-item ($k = 3$) scale (see Hirai 1999). The estimates indicated good reliability for all the constructs. To assess discriminant validity, we conducted a first likelihood ratio test (chi-square difference test) by specifying separate latent constructs to the same construct and comparing the fit of that model to the fit of the original unconstrained model (Hair et al. 2010). We proceeded stepwise by first specifying the mediating and the dependent variables to the same construct, then the independent and the dependent variables, then the independent and mediating variables, and finally the independent, mediating, and dependent variables. The fit of the unconstrained model was significantly different ($p < .001$) from those of all the other models, supporting discriminant validity. We continued the assessment of the discriminant validity by comparing the AVE values for the constructs with the squared correlation estimate between the constructs, which is considered as a more rigorous test (Hair et al. 2010). In all instances, AVE estimates were greater than the square of the correlation estimate, which shows that each latent construct explains more of the variance in its items than it shares a common variance with other constructs. This indicates a good discriminant validity of latent variables and that they are independent constructs.

The measurement models were compared across family and nonfamily firms by utilizing a multi-sample CFA (see Hair et al. 2010). The comparison of the measurement invariance between the two groups of firms (family and nonfamily businesses) indicates full configural invariance between the two groups. This

shows that a similar basic factorial structure exists in both groups of firms with the same number of constructs and items loaded on each construct. The goodness-of-fit statistics show that both models fit the data well (family business: $\chi^2(55) = 64.87$, $p = .170$; CFI = 0.993; RMSEA = 0.028; SRMR = 0.031; nonfamily businesses: $\chi^2(55) = 130.24$, $p < .001$; CFI = 0.957; RMSEA = 0.067; SRMR = 0.043). Finally, the convergent validity is adequate in both groups (AVE estimates ranged from 0.51 to 0.81; CR estimates ranged from 0.73 to 0.88). Both models have good discriminant validity, as the AVE of each construct was higher than its squared correlations with any other construct.

Metric invariance was assessed by testing the equivalence of factor loadings between the two group models. This was conducted by constraining the factor loadings so that they were equal across the groups. The χ^2 difference between the unconstrained baseline model and the constrained model was not statistically significant ($\Delta\chi^2 = 4.77$, $df = 7$, $p = .688$), indicating full metric invariance. Scalar invariance was tested by *constraining both item intercepts and factor loadings to make them equal* across the groups at the same time (Hair et al. 2010). The results show that there was no statistical difference between the unconstrained and constrained model ($\Delta\chi^2 = 17.40$, $df = 20$, $p = .627$), which supports the requirement for scalar invariance between the two groups. In summary, the metrics analyses show that the tested five-factor structure is sufficiently similar in family and nonfamily businesses to enable model comparisons between the groups.

Testing the Hypotheses

The hypotheses were tested using structural equation modeling (SEM). To do so, we estimated the structural models for both family and nonfamily businesses. Finally, the effects were adjusted for control variables in both models. The results of the SEM analysis are shown in Table 3.

Our results show that innovation orientation is positively associated with firm growth ($p < .001$) in family businesses, but not in nonfamily businesses. This result does not support our H1. Regarding the hypothesized relationship between a firm’s proactive orientation and its growth, the results illustrate that the relationship is positive among family ($p < .01$) and nonfamily businesses ($p < .01$). This supports our H2.

Table 3
Entrepreneurial Orientation, Entrepreneurial Activity, and Firm Growth in Family and Nonfamily Businesses

	Family Businesses	Nonfamily Businesses	
Direct Effects	β	β	
EO _{inno} →Firm growth	0.34***	0.15 [†]	H1: not supported
EO _{pro} →Firm growth	0.29**	0.22**	H2: supported
EO _{risk} →Firm growth	-0.03	0.31***	H3: not supported
Mediated Indirect Effects			
EO _{inno} →EA→Firm growth	0.25*	0.10	H4: not supported
EO _{pro} →EA→Firm growth	0.10	0.08	H5: not supported
EO _{risk} →EA→Firm growth	-0.09	0.27**	H6: not supported

EA = entrepreneurial activity; EO_{inno} = innovation orientation; EO_{pro} = proactive orientation; EO_{risk} = risk-taking orientation.

[†] $p < .1$

* $p < .05$

** $p < .01$

*** $p < .001$

Our results show that the third dimension of EO, risk taking, is not associated with firm growth among family businesses. In nonfamily businesses, a risk-taking orientation is positively associated with firm growth. The results do not support our H3, although a positive association was found in nonfamily businesses.

The mediation hypotheses were tested in both family and nonfamily businesses by following at two steps. First, we assessed whether the individual relationships between dependent, independent, and mediator variables were statistically significant. Second, we examined whether the effect of the independent variable on the dependent variable was reduced after the mediator was included in the model (Baron and Kenny 1986; Hair et al. 2010). A full mediation is supported if the path estimate between the independent and the dependent variable is reduced and if it is not statistically significant after including the mediator in the model. Similarly, a partial mediation is supported if the initial path estimate is reduced but is still significant (Hair et al. 2010) after the mediator is inserted in the model.

The results suggest that there is a potential mediating role of EA as it has a positive relationship with firm growth. Hence, the results

on the mediating effects of EA in family businesses show that the EA partially mediates an innovative orientation ($p < .01$). Because there was no similar mediating effect found in nonfamily businesses, the results do not support H4. Moreover, the results suggest that EA does not mediate the association of a proactive orientation with firm growth in either group of firms, thus, they do not support our H5.

Finally, our results show that the relationship between risk taking and firm growth is not mediated by EA among family businesses. This mechanism is, however, valid in nonfamily businesses. Thus, our H6 is not supported.

The robustness of the results was assessed by adding a set of control variables to the model. Following that step, the overall fit of the model was slightly lower than that of the uncontrolled model, but the model still fits the data adequately ($\chi^2(218) = 467.08$, $p < 0.001$, $\chi^2/df = 2.14$; CFI = 0.925; RMSEA = 0.046). The results on the hypothesis remain unchanged after the models were adjusted for control variables.

Discussion

Our results show that the concept of EO is highly applicable in studying family business

growth and performance as some studies have suggested (Casillas, Moreno, and Barbero 2010; Naldi et al. 2007). Previous studies (Lumpkin and Dess 2001; Wiklund 1999; Wiklund and Shepherd 2005), even in the family business context (Casillas, Moreno, and Barbero 2010; Naldi et al. 2007), have found that EO is positively associated with firm growth. Our study further emphasizes that the family business context plays a role in the mechanism of the EO–performance relationship, as our results show how this mechanism differs between family and nonfamily businesses.

Our study provides strong evidence that the dimensions of EO affect firm performance differently in family and nonfamily businesses. The findings therefore support previous research on the differences between family and nonfamily businesses, with regard to how the dimensions of EO affect firm growth. Our results show that only proactive orientation is positively associated with firm growth both in family and nonfamily businesses as hypothesized. We found no association between risk taking and firm growth among family businesses, although the association was established among nonfamily businesses. On the other hand, we found a positive association between innovation orientation and firm growth in family business, but not in nonfamily businesses. These differences were further elaborated on by investigating the mediating role of EA in family and nonfamily businesses.

Our findings clearly demonstrate the different mechanisms between EO and firm growth among family and nonfamily businesses as well as the complex nature of the EO–performance relationship. In family businesses, EA mediates the association between innovation orientation and firm growth, whereas in nonfamily businesses EA mediates the association between risk-taking orientation and firm growth. The results underscore that innovation orientation may enhance the EA of family businesses, both of which benefit their growth. As this association is absent among nonfamily businesses, it suggests that family involvement may actually promote an orientation toward innovation (Zahra 2005) and toward EA. A different kind of mechanism was found in nonfamily businesses that seem to benefit from EA when being oriented toward risk taking. Our results suggest that EA undertaken by family businesses to achieve firm growth is likely to be productive when the firm is geared toward

innovation and renewal rather than risk taking per se. We interpret the application of an innovation-oriented, but less risky, strategy to imply that family businesses might be more interested in securing continuity and wealth creation in the long run (see Sharma, Chrisman, and Chua 1997; Zahra, Hayton, and Salvato 2004) than in achieving rapid growth through a risky strategy. On the other hand, nonfamily businesses without restrictive family traditions, customs, or heritage (see Craig and Lindsay 2002; Short et al. 2009; Zahra 2005) might be geared toward a more risk-oriented strategy in pursuing growth.

Our findings generate several contributions. First, the research extends the EO literature by introducing the concept of EA bridging EO and firm growth. This is particularly relevant as previous studies on entrepreneurship orientation in family businesses have not tackled those mediating activities influencing firm growth (Miller and Le Breton-Miller 2011) but rather concentrated on the antecedents of entrepreneurship in family businesses (Covin and Wales 2012; Cruz and Nordqvist 2012). Our results support the idea of needing a mediating activity to benefit from the strategic mindset of EO and to improve firm performance (Lumpkin and Dess 1996). EA is an example of an intervening firm-level behavior that translates an entrepreneurial mindset into improved firm performance.

Second, previous research does not extensively cover comparisons between family and nonfamily businesses in terms of using a multidimensional EO construct. Our study supports the previous varying findings on differences between family and nonfamily businesses with regard to the dimensions of the EO construct and their relationship with firm performance (Casillas, Moreno, and Barbero 2010; Naldi et al. 2007). Therefore, our findings confirm the importance of studying the dimensions of EO separately, not as a composite measure, and in different organizational contexts (Rauch et al. 2004).

Finally, by using a comparative approach, we were able to tease out the differences in the mechanism of the EO–performance relationship between family and nonfamily businesses. Our study demonstrates that in family businesses, the combination of innovation orientation and EA promotes firm growth, whereas in nonfamily businesses it is the combination of an orientation toward risk taking with EA that

has a positive impact on firm growth. The previous research focusing on EO in family businesses has emphasized the role of risk taking in the performance of family businesses (Naldi et al. 2007; Zahra 2005). Our findings on the positive role of innovation orientation in the growth of family businesses and how such growth differs from that of nonfamily businesses complement the previous literature (see Casillas, Moreno, and Barbero 2010). It may be that “familiness” and the family dimension have an effect on the studied mechanism and the ways in which family businesses attempt to pursue continuity and wealth creation. The family dimension—the influence of founder, family culture, and other family-related factors (Zahra 2005) or that of a high concentration of ownership (Chandler 1990; Naldi et al. 2007)—might result in less risky strategies, which might in turn affect the way family businesses adapt to the external environment (Zahra, Hayton, and Salvato 2004) and, therefore, their EA (Carland et al. 1984). Theoretically, this suggests that theorizing the role of EA when studying strategic decision-making in family businesses is essential.

Our study also has managerial implications, particularly for family businesses. Any successful business needs to adapt to its business environment and to exploit the external changes and opportunities, and family businesses are no exception. Family businesses in particular are reluctant to jeopardize their ownership or wealth but are concerned with securing continuity for future generations. The emphasis on entrepreneurship in family businesses seems to enhance their market orientation (Zahra, Hayton, and Salvato 2004). Our findings underscore that the orientation toward innovation and renewal seems to be a relevant way for family businesses to orient themselves toward the external environment. If family businesses are able to adapt their innovative orientation to EA in their strategies, they may be able to minimize the suggested unfavorable effects of conservatism and traditional values on their performance. This highlights the need to continuously innovate and renew the business dimension of family businesses to adapt to the changes in the business environment even though at the same time, there is a desire to maintain and cherish family ownership, traditions, and values (see Aronoff 2004; Habbershon and Pistrui 2002).

Limitations and Future Research

Despite the promising results in terms of the mechanism of the EO–performance relationship in business growth, our study has its limitations, which also offer interesting opportunities for future work. First, some of the items we used to measure EO reflect actual behavior more than intention. However, drawing from previous literature and established constructs, we assume that EO largely mirrors a firm’s inclination toward entrepreneurship and a mindset to suit (Covin and Wales 2012; Wiklund 1999). Further, the scale we used has been criticized for mixing past behavior and attitudes (Brown, Davidsson, and Wiklund 2001), but it enabled us to ensure comparability with previous research.

Second, we introduced the concept of EA as a behavior bridging EO and firm performance. The measurement of EA could be improved, and furthermore, it is only one type of activity linking EO and firm growth. It is important to investigate and capture other activities such as exploration of new business opportunities (see Kollmann and Stockmann 2014) that are needed to translate an entrepreneurial mindset into improved performance. In a similar vein, a longitudinal research setting would be of value in studying any mediating activities between EO and the selected performance outcomes. After all, the positive relationship between EO and performance increases over time (Wiklund 1999), and a longer time span may therefore influence the way the mechanism works. Moreover, in a longitudinal setting, the determinants of EO could also be assessed more precisely.

In this study, family businesses were treated as a context, meaning that even though we controlled for the concentration of family ownership in our analysis, there was no opportunity to investigate the uniqueness of family businesses in terms of family involvement and “familiness” (Zahra and Sharma 2004). Our results highlight that context plays a role in the mechanism of the EO–performance relationship. The differences found in family and nonfamily businesses suggest that “familiness” merits further investigation in order to understand how the presence of family might influence the mechanism and its components. In addition, it would be useful to investigate the role of “familiness” in other phases of a firm’s life cycle too, such as its foundation, its

innovative activity, its corporate entrepreneurial movements, and its succession phase.

Conclusions

Our study on the mechanism of the EO–performance relationship with intervening EA in family and nonfamily businesses provides a novel insight into studying business growth and EO in more general terms. Our findings contribute to the literature on EO by underscoring the essential role of mediating activities and also the differences in the proposed mechanism. By separating the three dimensions of EO and focusing on the mediating role of EA, the study was able to expose interesting differences between family and nonfamily businesses with regard to the mechanism of the EO–performance relationship. Because family businesses are subject to the same continuous pressures of uncertainty, environmental change, and competitive forces that determine the actions of any business, an entrepreneurial mindset and activities are of crucial importance for firm growth. We argue that whereas growth in nonfamily businesses benefits from risk taking, in family businesses, the orientation toward innovation and renewal is an efficient way for them to adapt to and exploit the opportunities of the external business environment in order to achieve growth.

References

- Allen, R. S., and M. M. Helms (2006). "Linking Strategic Practices and Organizational Performance to Porter's Generic Strategies," *Business Process Management Journal* 12(4), 433–454.
- Almus, M., and E. A. Nerlinger (1999). "Growth of New Technology-Based Firms: Which Factors Matter?," *Small Business Economics* 13(2), 141–154.
- Alvarez, S. A., and J. B. Barney (2007). "Discovery and Creation: Alternative Theories of Entrepreneurial Action," *Strategic Entrepreneurship Journal* 1(1–2), 11–26.
- Anderson, R. C., and D. M. Reeb (2003). "Founding-Family Ownership and Firm Performance: Evidence from the S&P 500," *Journal of Finance* 58(3), 1301–1328.
- Ardichvili, A., R. Cardozo, and S. Ray (2003). "A Theory of Entrepreneurial Opportunity Identification and Development," *Journal of Business Venturing* 18(1), 105–123.
- Aronoff, C. E. (2004). "Self-Perpetuation Family Organization Built on Values: Necessary Condition for Long-Term Family Business Survival," *Family Business Review* 17(1), 55–59.
- Astrachan, J. H., and P. Jaskiewicz (2008). "Emotional Returns and Emotional Costs in Privately Held Family Businesses: Advancing Traditional Business Valuation," *Family Business Review* 21(2), 139–149.
- Astrachan, J. H., S. B. Klein, and K. X. Smyrniotis (2002). "The F-PEC Scale of Family Influence: A Proposal for Solving the Family Business Definition Problem," *Family Business Review* 15(1), 45–58.
- Baron, R. M., and D. A. Kenny (1986). "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations," *Journal of Personality and Social Psychology* 51(6), 1173–1182.
- Basu, A. (2004). "Entrepreneurial Aspirations among Family Business Owners: An Analysis of Ethnic Business Owners in the UK," *International Journal of Entrepreneurial Behaviour & Research* 10(1/2), 12–33.
- Bateman, T. S., and J. M. Crant (1993). "The Proactive Component of Organizational Behavior: A Measure and Correlates," *Journal of Organizational Behavior* 14(2), 103–118.
- Baum, J. R., E. A. Locke, and K. G. Smith (2001). "A Multidimensional Model of Venture Growth," *Academy of Management Journal* 44(2), 292–303.
- Becherer, R. R., and J. G. Maurer (1999). "The Proactive Personality Disposition and Entrepreneurial Behavior among Small Company Presidents," *Journal of Small Business Management* 37(1), 28–36.
- Birley, S., and P. Westhead (1990). "Growth and Performance Contrasts among Types of Small Firms," *Strategic Management Journal* 11(7), 535–557.
- Brown, T. E., P. Davidsson, and J. Wiklund (2001). "An Operationalization of Stevenson's Conceptualization of Entrepreneurship as Opportunity-Based Firm Behavior," *Strategic Management Journal* 22(10), 953–968.
- Carland, J. W., F. Hoy, W. R. Boulton, and J. A. C. Carland (1984). "Differentiating Entrepreneurs from Small Business Owners: A Conceptualization," *Academy of Management Review* 9(2), 354–359.
- Carney, M. (2005). "Corporate Governance and Competitive Advantage in Family-Controlled Firms," *Entrepreneurship Theory and Practice* 29(3), 249–265.

- Casillas, J. C., A. M. Moreno, and J. L. Barbero (2010). "A Configurational Approach of the Relationship between Entrepreneurial Orientation and Growth of Family Firms," *Family Business Review* 23(1), 27–44.
- (2011). "Entrepreneurial Orientation of Family Firms: Family and Environmental Dimensions," *Journal of Family Business Strategy* 2(2), 90–100.
- Chan, Y. E., N. Bhargava, and C. T. Street (2006). "Having Arrived: The Homogeneity of High-Growth Small Firms," *Journal of Small Business Management* 44(3), 426–440.
- Chandler, A. D. (1990). *Scale and Scope: The Dynamics of Industrial Capitalism*. Boston, MA: Harvard University Press.
- Cho, H.-J., and V. Pucik (2005). "Relationship between Innovativeness, Quality, Growth, Profitability, and Market Value," *Strategic Management Journal* 26(6), 555–575.
- Covin, J. G., and D. P. Slevin (1989). "Strategic Management of Small Firms in Hostile and Benign Environments," *Strategic Management Journal* 10(1), 75–87.
- (1991). "A Conceptual Model of Entrepreneurship as Firm Behavior," *Entrepreneurship Theory and Practice* 16(1), 7–25.
- Covin, J. G., and J. W. Wales (2012). "The Measurement of Entrepreneurial Orientation," *Entrepreneurship Theory and Practice* 36(4), 677–702.
- Craig, J. B. L., and N. J. Lindsay (2002). "Incorporating the Family Dynamic into the Entrepreneurship Process," *Journal of Small Business and Enterprise Development* 9(4), 416–430.
- Craig, J. B. L., and K. Moores (2006). "A 10-Year Longitudinal Investigation of Strategy, Systems and Environment on Innovation in Family Firms," *Family Business Review* 19(1), 1–10.
- Craig, J. B. L., C. Dibrell, and P. S. Davis (2008). "Leveraging Family-Based Brand Identity to Enhance Firm Competitiveness and Performance in Family Businesses," *Journal of Small Business Management* 46(3), 351–371.
- Cruz, C., and M. Nordqvist (2012). "Entrepreneurial Orientation in Family Firms: A Generational Perspective," *Small Business Economics* 38(1), 33–49.
- Daily, C. M., and M. J. Dollinger (1991). "Family Firms Are Different," *Review of Business* 12(1–2), 3–5.
- Daily, C. M., and S. S. Thompson (1994). "Ownership Structure, Strategic Posture, and Firm Growth: An Empirical Examination," *Family Business Review* 7(3), 237–249.
- Delmar, F., P. Davidsson, and W. B. Gartner (2003). "Arriving at the High-Growth Firm," *Journal of Business Venturing* 18(2), 189–216.
- Dess, G. G., B. C. Pinkham, and H. Yang (2011). "Entrepreneurial Orientation: Assessing the Construct's Validity and Addressing Some of Its Implications for Research in the Areas of Family Business and Organizational Learning," *Entrepreneurship Theory and Practice* 35(5), 1077–1090.
- Dobbs, M., and R. T. Hamilton (2007). "Small Business Growth: Recent Evidence and New Directions," *International Journal of Entrepreneurial Behaviour & Research* 13(5), 296–322.
- Eisinga, R. M., T. Grotenhuis, and B. Pelzer (2013). "The Reliability of a Two-Item Scale: Pearson, Cronbach, or Spearman-Brown?," *International Journal of Public Health* 58(4), 637–642.
- Gomez-Meija, L. R., M. Larraza-Kintana, and M. Makri (2003). "The Determinants of Executive Compensation in Family-Controlled Public Corporations," *Academy of Management Journal* 46(2), 226–237.
- Gudmundson, D., E. A. Hartman, and C. B. Tower (1999). "Strategic Orientation: Differences between Family and Non-Family Firms," *Family Business Review* 12(1), 27–39.
- Habbershon, T. G., and J. Pistrui (2002). "Enterprising Families Domain: Family-Influenced Ownership Groups in Pursuit of Transgenerational Wealth," *Family Business Review* 15(3), 223–238.
- Hair, J. F., W. C. Black, B. J. Babin, and R. E. Anderson (2010). *Multivariate Data Analysis: A Global Perspective*. Upper Saddle River, NJ: Prentice Hall.
- Hamel, G. (2000). *Leading the Revolution*. Boston, MA: Harvard Business School Press.
- Hirai, A. (1999). "The Relationship between Listening and Reading Rates of Japanese EFL Learners," *Modern Language Journal* 83(3), 367–384.
- Hmieleski, K. M., and R. A. Baron (2008). "When Does Entrepreneurial Self-Efficacy Enhance versus Reduce Firm Performance?," *Strategic Entrepreneurship Journal* 2(1), 57–72.
- Ireland, R. D., M. A. Hitt, and D. G. Sirmon (2003). "A Model of Strategic Entrepreneur-

- ship: The Construct and Its Dimensions,” *Journal of Management* 29(6), 963–989.
- Khandwalla, P. N. (1977). “Some Top Management Styles, Their Context and Performance,” *Organization and Administrative Sciences* 7(4), 21–51.
- Kollmann, T., and C. Stockmann (2014). “Filling the Entrepreneurial Orientation-Performance Gap: The Mediating Effects of Exploratory and Exploitative Innovations,” *Entrepreneurship Theory and Practice* 38(5), 1001–1026. doi: 10.1111/j.1540-6520.2012.00530.x.
- Levinthal, D. A., and J. G. March (1993). “The Myopia of Learning,” *Strategic Management Journal* 14(8), 95–112.
- Luksha, P. (2008). “Niche Construction: The Process of Opportunity Creation in the Environment,” *Strategic Entrepreneurship Journal* 2(4), 269–283.
- Lumpkin, G. T., and G. G. Dess (1996). “Clarifying the Entrepreneurial Orientation Construct and Linking It to Performance,” *Academy of Management Review* 21(1), 135–172.
- (2001). “Linking Two Dimensions of Entrepreneurial Orientation to Business Performance: The Moderating Role of Environment and Industry Life Cycle,” *Journal of Business Venturing* 16(5), 429–451.
- Lumpkin, G. T., K. H. Brigham, and T. W. Moss (2010). “Long-Term Orientation: Implications for the Entrepreneurial Orientation and Performance of Family Businesses,” *Entrepreneurship and Regional Development* 22(3–4), 241–264.
- McCann, J. E., A. Y. Leon-Guerrero, and J. D. Haley, Jr. (2001). “Strategic Goals and Practices of Innovative Family Businesses,” *Journal of Small Business Management* 39(1), 50–59.
- Madsen, E. L. (2007). “The Significance of Sustained Entrepreneurial Orientation on Performance of Firms—A Longitudinal Analysis,” *Entrepreneurship and Regional Development* 19(2), 185–204.
- Maury, B. (2006). “Family Ownership and Firm Performance: Empirical Evidence from Western European Corporations,” *Journal of Corporate Finance* 12(2), 321–341.
- Miller, D. (1983). “The Correlates of Entrepreneurship in Three Types of Firms,” *Management Science* 29(7), 770–791.
- Miller, D., and P. Friesen (1982). “Innovation in Conservative and Entrepreneurial Firms: Two Models of Strategic Momentum,” *Strategic Management Journal* 3(1), 1–25.
- Miller, D., and I. Le Breton-Miller (2005). *Managing for the Long Run: Lessons in Competitive Advantage from Great Family Businesses*. Boston, MA: Harvard Business School Press.
- (2011). “Governance, Social Identity, and Entrepreneurial Orientation in Closely Held Public Companies,” *Entrepreneurship Theory and Practice* 35(5), 1051–1076.
- Moreno, A. M., and J. C. Casillas (2008). “Entrepreneurial Orientation and Growth of SMEs: A Causal Model,” *Entrepreneurship Theory and Practice* 32(3), 507–528.
- Naldi, L., M. Nordqvist, K. Sjöberg, and J. Wiklund (2007). “Entrepreneurial Orientation, Risk Taking, and Performance in Family Firms,” *Family Business Review* 20(1), 33–58.
- Olson, P. D., V. S. Zuiker, S. M. Danes, K. Stafford, R. K. Z. Heck, and K. A. Duncan (2003). “The Impact of the Family and the Business on Family Business Sustainability,” *Journal of Business Venturing* 18(5), 639–666.
- Pittino, D., and F. Visintin (2009). “Innovation and Strategic Types of Family SMEs: A Test and Extension of Miles and Snow’s Configurational Model,” *Journal of Enterprising Culture* 17(3), 257–295.
- Podsakoff, P. M., S. B. MacKenzie, J.-Y. Lee, and N. P. Podsakoff (2003). “Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies,” *Journal of Applied Psychology* 88(5), 879–903.
- Puhakka, V. (2007). “Effects of Opportunity Discovery Strategies of Entrepreneurs on Performance of New Ventures,” *Journal of Entrepreneurship* 16(1), 19–51.
- Rauch, A., J. Wiklund, M. Frese, and G. T. Lumpkin (2004). “Entrepreneurial Orientation and Business Performance: Cumulative Empirical Evidence,” paper presented at the 23rd Babson College Entrepreneurship Research Conference. Glasgow, UK.
- Rauch, A., J. Wiklund, G. T. Lumpkin, and M. Frese (2009). “Entrepreneurial Orientation and Business Performance: An Assessment of Past Research and Suggestions for the Future,” *Entrepreneurship Theory and Practice* 33(3), 761–787.
- Rogoff, E. G., and R. K. Z. Heck (2003). “Evolving Research in Entrepreneurship and

- Family Business: Recognizing Family as the Oxygen that Feeds the Fire of Entrepreneurship," *Journal of Business Venturing* 18(5), 559–566.
- Salvato, C. (2004). "Predictors of Entrepreneurship in Family Firms," *Journal of Private Equity* 7(3), 68–76.
- Sandvik, I. L., and K. Sandvik (2003). "The Impact of Market Orientation on Product Innovativeness and Business Performance," *International Journal of Research in Marketing* 20(4), 355–376.
- Sciascia, S., L. Naldi, and E. Hunter (2006). "Market Orientation as Determinant of Entrepreneurship: An Empirical Investigation on SMEs," *International Entrepreneurship Management Journal* 2(1), 21–38.
- Shane, S. A., and S. Venkataram (2000). "The Promise of Entrepreneurship as a Field of Research," *Academy of Management Journal* 25(1), 217–226.
- Sharma, P. J., J. Chrisman, and J. H. Chua (1997). "Strategic Management of the Family Business: Past Research and Future Challenges," *Family Business Review* 10(1), 1–35.
- Short, J. C., G. T. Payne, K. H. Brigham, G. T. Lumpkin, and J. C. Broberg (2009). "Family Firms and Entrepreneurial Orientation in Publicly Traded Firms. A Comparative Analysis of the S&P 500," *Family Business Review* 22(1), 9–24.
- Sirmon, D. G., and M. A. Hitt (2003). "Managing Resources: Linking Unique Resources, Management, and Wealth Creation in Family Firms," *Entrepreneurship Theory and Practice* 27(4), 339–358.
- Stenholm, P. (2011). "Innovative Behavior as a Moderator of Growth Intentions," *Journal of Small Business Management* 49(2), 233–251.
- Subramanian, A., and S. Nilakanta (1996). "Organizational Innovativeness: Exploring the Relationship between Organizational Determinants of Innovation, Types of Innovations, and Measures of Organizational Performance," *International Journal of Management Science* 24(6), 631–647.
- Swierczek, F. W., and T. T. Ha (2003). "Entrepreneurial Orientation, Uncertainty Avoidance and Firm Performance," *International Journal of Entrepreneurship and Innovation* 4(1), 46–58.
- Thompson, J. L. (1999). "A Strategic Perspective of Entrepreneurship," *International Journal of Entrepreneurial Behaviour & Research* 5(6), 279–296.
- Venkataram, S. (1997). "The Distinctive Domain of Entrepreneurship Research," in *Advances in Entrepreneurship, Firm Emergences and Growth*. Ed. J. A. Katz. Greenwich, CT: JAI Press, 119–138.
- Venkatraman, N. (1989). "Strategic Orientation of Business Enterprises: The Construct, Dimensionality, and Measurement," *Management Science* 35(8), 942–962.
- Ward, J. L. (1987). *Keeping the Family Business Healthy: How to Plan for Continuous Growth, Profitability and Family Leadership*. San Francisco, CA: Jossey Bass.
- Wiklund, J. (1999). "The Sustainability of the Entrepreneurial Orientation-Performance Relationship," *Entrepreneurship Theory and Practice* 24(1), 37–48.
- Wiklund, J., and D. Shepherd (2003). "Aspiring for, and Achieving Growth: The Moderating Role of Resources and Opportunities," *Journal of Management Studies* 40(8), 1919–1941.
- (2005). "Entrepreneurial Orientation and Small Business Performance: A Configurational Approach," *Journal of Business Venturing* 20(7), 71–91.
- Zahra, S. A. (2005). "Entrepreneurial Risk Taking in Family Firms," *Family Business Review* 18(1), 23–40.
- Zahra, S. A., and P. Sharma (2004). "Family Business Research: A Strategic Reflection," *Family Business Review* 17(4), 331–346.
- Zahra, S. A., J. C. Hayton, and C. Salvato (2004). "Entrepreneurship in Family vs. Non-Family Firms: A Resource-Based Analysis of the Effect of Organizational Culture," *Entrepreneurship Theory and Practice* 28(4), 363–381.
- Zou, S., C. R. Taylor, and G. E. Osland (1998). "The EXPERF Scale: A Cross-National Generalized Export Performance Measure," *Journal of International Marketing* 6(3), 37–58.

Latent Variables and Items Used

	Growth^a
GROWTH1	The firm has achieved rapid growth.
GROWTH2	Our sales grow faster than our competitors.
GROWTH3	Employment growth in our company is faster than among our competitors.
GROWTH4	Our market share grows faster than that of our competitors.
	Entrepreneurial orientation^a
EOinno1 ^b	In general, the top managers of my firm favor a strong emphasis on research and development (R&D), technological leadership, and innovations.
EOinno2	Our firm has introduced very many new lines of products or services.
EOinno3	Changes in our product or service lines have usually been quite dramatic.
EOpro1	In dealing with its competitors, my firm is very often the first business to introduce new products/services, administrative techniques, operating technologies, etc.
EOpro2	In dealing with its competitors, my firm typically initiates actions that competitors then respond to.
EOpro3	In general, the top managers of my firm have a strong tendency to be ahead of other competitors in introducing novel ideas or products.
EOrisk1	In general, the top managers of my firm have a strong proclivity for high-risk projects with chances of very high returns compared with projects with normal and certain rates of return.
EOrisk2	In general, the top managers of my firm believe that owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objectives.
EOrisk3 ^b	When confronted with decision-making situations involving uncertainty, my firm typically adopts a cautious, "wait-and-see" posture in order to minimize probability of making costly decisions as compared with a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities [REVERSED].
	Entrepreneurial activity^a
EA1 ^b	We systematically search for new business concepts through observation of processes in the environment.
EA2	Compared with our competitors, we recognize efficiently new growth opportunities.
EA3	Compared with our competitors, we are able to exploit efficiently new growth opportunities.
	Control variables
SIZE	Firm size in number of employees (logarithmic)
AGE	Firm age (logarithmic)
ENVVDYN	Herfindahl-Hirschman Index: industry-level rate of unpredicted change
OWNERS	Ownership structure: the number of owners from one family in relation to the total number of owners

^aAll the statements were measured on a seven-point Likert scale ranging from 1 = *totally disagree* to 7 = *totally agree*.

^bItem was omitted during the respecification of the measurement model.

Unexpected Succession: When Children Return to Take Over the Family Business

by Marie-Christine Chalus-Sauvannet, Bérangère Deschamps, and Luis Cisneros

This research explores family succession in which the successors were unexpected. We present six cases studies of children who initially pursued careers outside the family firm but who later decided to return and successfully take over the small family business. Our outcomes explain why they decided to return, the conditions that they set for succeeding their fathers, and the way they approached the management of the family firm. We show that the success they experienced in their professional careers far from the family business positioned them as legitimate leaders. They made a deliberate personal choice to succeed, negotiating the conditions, and this put them on the same level as their predecessors. These successors act as entrepreneurs, they are proactive, take risks, detect new business opportunities and do not hesitate to innovate. The changes that they implement are possible thanks to the support of their predecessors who avoids the destabilization of the organization.

Introduction

“I’d never even thought of taking over my parent’s company. However, when I was 30 I became aware that my professional life couldn’t continue as it was. That’s how the idea of leaving Paris to take up the challenge came about” [case 3]. These are the words of one of the successors interviewed in our study; it underlines the fact that taking over his father’s business was not his first professional choice but rather a development in his professional career, an alternative solution to a particular context, one more in line with his choice of lifestyle, but not in his original plan.

Even if management research into family businesses was somewhat late to develop

(Casillas and Acedo 2007), family firm literature has experienced significant growth in the last years (Sharma et al. 2007). The most important research journals all publish articles in the field (Schulze et al. 2001), and every year there are more and more special issues on related topics. One of the dominant themes in the family business literature is succession (Allouche and Amann 2000; Chua, Chrisman, and Sharma 2003; Sharma 2004; Ward 1987). However, the succession process in family firms is often studied from the same points of view: the advance preparation of the chosen child for his/her role (Birley 2002; Christensen 1953; Ward 1987), the successor training (Handler 1990; Lansberg 1988; Ward 1987), the planned succession (Hillier and McColgan 2009;

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Sharma, Chua, and Chrisman 2000; Sharma, Chrisman, and Chua 2003), the prevention of conflicts in the family (De Massis, Chua, and Chrisman 2008), the conditions for the survival of the business over several generations (Le Breton-Miller, Miller, and Steier 2004; Bagby, 2004), and the commitment of the new generation (Sharma and Irving 2005).

The literature treats the cases of successors whose implication is foreseen, necessary, and desired by the parents. It does not, however, look into other succession situations such as what happens in the case of successors who are not initially expected or prepared to take over the company (either by personal choice or by choice of the parents) but do in fact come back to the family business. Are they welcome? What abilities do they have to manage the family business from which they distanced themselves? The succession may have been planned but not with the ultimate successor, and as a result gaps appear during the transfer (Bagby 2004). In this article, we discuss the why and the how: why is there an unexpected succession—what are the triggers which lead to it? How does it occur and what factors are required for unlikely successors succeed when they take over the family firm?

In the first section, we provide a reminder of the theoretical context. In the next section, we present our examples: six family members who decided to pursue careers outside the family business, who were engaged in their own impressive careers and then later came back to the family firm. The discussion section covers the context, the profiles of these children, and the factors that made the succession a success within the specific family and professional context.

Theoretical Background

The stakes involved in family business succession are high (Le Breton-Miller, Miller, and Steier 2004). Indeed, the succession process is the most complex and critical moment in the life of any family firm (Kets de Vries, Carlock, and Florent-Treacy 2007).

Summary of Literature Regarding the Succession Process

The literature focuses on succession planning, a solution that minimizes the risk of closure (only one-third of family businesses survive to the second generation and 10–15 percent to the third; Le Breton-Miller, Miller, and

Steier 2004). Lansberg (1988) states that succession planning must start far in advance, with the goal of maintaining harmony in the family and the company. Nevertheless, planning is not the only factor for success (Diwisch, Voithofer, and Weiss 2009); there is also the preparation of successors for the transfer (Sharma and Smith 2008 or Mazzola, Marchisio, and Astrachan 2008); the successor is not just a spectator of a play already underway (Longenecker and Schoen 1978), he is involved in the definition of the firm's strategic plan (Sharma, Chrisman, and Chua 2003). He is trained for his new role (Cadieux 2004; Handler 1990; Lansberg 1988) and the transfer is expected; it has been anticipated, planned, and explained to all stakeholders. For Lambrecht (2005), the transfer of a family business is a lifelong, continuous process to which all family members contribute, thereby creating a dynasty.

The choice of successor is also fundamental (Lansberg 1988; Sharma, Chrisman, and Chua 2003; Ward 1987). For Christensen (1953), the succession planning has to include identifying a potential successor(s), designating the successor(s), and notifying the chosen successor as well as the other stakeholders. Le Breton-Miller, Miller, and Steier (2004) regret the lack of literature dealing with the process of choosing a successor. However, more recently, Royer et al. (2008), who studied 860 family businesses, have indicated that specific tacit knowledge characteristics combined with a favorable transaction atmosphere, in certain contexts, make a family member the most suitable successor. For De Noble, Ehrlich, and Singh (2007), it is essential to select a motivated and competent heir. They suggest a number of desirable skills for the successor based on social capital and human capital.

Indeed, the designation of the successor by the predecessor is not sufficient to ensure the succession goes well. The involvement and the genuine motivation of the successor during the succession process are key factors in the successful transfer of the company's leadership. In addition to the other points they raise, Le Breton-Miller, Miller, and Steier (2004) highlight the importance of the parent's motivation for transferring the business to his/her child. Handler (1990) notes that the adjustment of the role of parent/leader can be defined in terms of a reduction over time of their implication in the organization and that this is a long and subtle process. The predecessor must be ready to

leave and concretely anticipate the transition to a new role with retirement in view (Cadieux 2004; Handler 1990; Sharma, Chua, and Chrisman 2000). Birley (2002) notes that in the literature, the subject of the motivation and the objectives of the predecessors (with regard to transferring leadership or to disengagement) are not directly addressed within the planning process. Moreover, this process must also cover the planning of the (scheduled) retirement of the older generation (Barnes and Hershon 1976; Kepner 1983).

Sharma, Chua, and Chrisman (2000) believe that succession planning must include “*a clarification of the role, responsibilities, and ownership stake of the incumbent after succession*” (p. 234). These authors also found that predecessors make the decision to step aside when they deem it is feasible, that is, when a willing and trusted successor is available within the family (Sharma, Chrisman, and Chua 2003).

Throughout the literature, succession studies deal only with situations where the predecessor anticipates, plans, and organizes the succession process. In these cases, we observe that the key actor in the family business succession is the predecessor. The succession process is a linear, planned, and prepared, with predecessor and successors playing distinct and consecutive roles (Handler 1990). The successor has been selected, trained, and managed under the control of the predecessor. We have, however, identified a gap in the literature with regard to the successor in his role of decision-maker within the succession process, and with regard to the successor who is not planned. Why does this successor come back to manage the family firm when it was not previously considered an option? How does he/she go about doing this? What changes then occur to the succession process?

Motivations to Succeed in the Parent's Company

According to literature on the subject, the motivation to succeed one's parents can be divided into different categories: continuity of family identity, developing the family firm, or an obligation to succeed a parent.

(1) The continuity of family identity is linked to the emotional side of family enterprise succession (Astrachan and Jaskiewicz 2008; Lumpkin, Martin, and Vaughn 2008). Lambrecht (2005) proposes several emotional elements that push children to succeed their

parents: continuity of the family's heritage (inheritance), preservation of the family name, and the advantages of a long-term strategy (family influence, engagement for life). Additionally, Ward (1987) mentions the social status associated with the continuity of the family tradition. (2) Successors, with an entrepreneurial profile, tend to join companies because they aspire to take control (Stavrou 1998; Ward 1987). Moreover, as they benefit from their parents' business experience and knowledge, they have the keys to the future development and success of the company. They aim to do better than their parents. The company is then seen as a platform that enables them to expand their professional network as a symbol of power and merit (Frishkoff and Brown 1993; Rosenblatt et al. 1985). Heirs know that they will be able to wield significant power in the family firm (Cadieux, Lorrain, and Hugron 2002). (3) Sharma and Irving (2005) carried out useful research on the commitment of successors. They describe different types of commitment and two of these—the normative (based on duty) and the imperative (based on need)—are obligations. In the case of imperative commitment, the heir's motivation is linked to their relationship with the predecessor. Indeed, in some cases, the heir is simply “conditioned” to take over the parents' company and feels such a strong obligation to do so (Birley 1986, 2002) that it is impossible for them to disappoint their parents (Ward and Aronoff 1990). The role played by the predecessor can also have an influence on the successor's commitment: by taking on accompanying roles such as “technical support” or “consultant,” for example, the predecessors can reassure their successors (Cadieux 2007; Handler 1990). However, it is worth noting that in many cases, this role has to be adapted so as to not become a hindrance to the heir taking over the company.

There are, however, abundant reasons for the younger generation not to join the family firm. Stavrou and Swiercz (1998) states that the decision to enter—or not—the family business is linked to family issues and not to business issues. The fact that children finally join or do not join the family company depends on their personal needs, goals, skills, and abilities (Stavrou 1998). The heirs who do not join the company want to get away from the family and experience something else (Kets de Vries, Carlock, and Florent-Treacy 2007) and to explore their own career choices (Ward 1987).

The continuing presence of their predecessors and the governing structures, the family rituals related to business, can therefore be perceived as a constraint (Handler 1990; Matthews, Moore, and Fialko 1999). There are also heirs who simply do not want to become involved in the family business in order to avoid conflicts with the incumbent (Gersick et al. 1997), a predecessor who would give them no place (Gersick et al. 1997; Kets de Vries, Carlock, and Florent-Treacy 2007). Another explanation for the lack of desire to follow in the footsteps of the parents can be a need for recognition and legitimacy (Kets de Vries, Carlock, and Florent-Treacy 2007) outside of the family.

We aim to supplement the literature mentioned previously, highlighting the motivations of the children who initially left the family circle to live their lives elsewhere and to have an independent professional experience before returning to the family firm. How does the succession unfold if it was never envisaged that the child in question becomes the successor in the family SME? We look at the children's motivations for becoming an "unexpected" successor. Further follows a presentation of the case studies, the basis for our argumentation.

Research Methodology **An Exploratory, Qualitative, and Longitudinal Study**

As there is no specific literature on this topic, the goal of the exploratory research we adopted is to provide a better understanding of the issues involved (Sekaran 2003). Our research focused on six family businesses within which the present directors of the firms took over from their fathers without being initially foreseen as successors. We aimed to shed light on why, after having stayed away from the family business, they decided to become involved, seemingly at the last moment, before the predecessor retired. We also looked at how that happened.

To this end, we chose longitudinal and qualitative data collection approaches. Qualitative research methods enable a dialogue to be developed, in addition to providing a better understanding of the issues at hand, by creating the necessary flexibility to achieve an open exploration of a little studied and complex phenomenon (Creswell 2002). Indeed, this method is strongly recommended to gain insight into complex phenomena and to offer explanations (Lambrecht 2005). For this reason, McCollom

(1990) suggests that qualitative research is particularly appropriate to analyze family business issues.

From among the qualitative methods available, we chose the case study approach as it is useful in generating new knowledge in exploratory situations (Patton and Applebaum 2003). Yin (2009) recommends this method for studying social situations, events, or specific and complex interactions. Furthermore, family succession is considered a complex phenomenon (Brockhaus 2004; Chittoor and Das 2007; Handler 1990; Mickelson and Worley 2003; McGivern 1978; Sharma 2004), and several researchers have already used the case method to study it (Cadieux 2007; Cadieux, Lorrain, and Hugron 2002; Chittoor and Das 2007; Ibrahim, Soufani, and Lam 2001; Lambrecht 2005; Mazzola, Marchisio, and Astrachan 2008; Mickelson and Worley 2003).

Our cases covered six atypical successions where the firm was transferred from father to child—they are atypical in the sense that the successors had neither planned on owning nor managing the family firm. The successors were followed on a regular basis by the authors of this paper for periods of from two to three years (see Table 1). The role of the researchers was to observe the transfers of leadership, but as time went on, they also became confidants of the successors. This longitudinal approach provided the researchers not only with a detailed and intimate understanding of the successors but also of their companies (Ruspini 2002). Initially, research meetings were monthly, becoming progressively less frequent.

On the basis of the data collected during this longitudinal research, we created six case studies that we have analyzed with the aim of providing greater insight into this form of family firm succession.

A Case Study Method

Our data were mainly qualitative and structured using a multiple case study approach. Our research allowed us to obtain in-depth information and to formulate answers to the questions "why did the successors come back to the family business" and "how did they act in the role of new owner-manager." According to Yin (2009), these kinds of questions are well suited to the case study method.

Selection of Cases. We used an iterative sampling frame (Yin 2009). Eisenhardt (1989) and

Table 1
Overview of Data Collection

	Predecessor	Successor	Sibling
Case 1 (firm followed for three years)	Father	Son	Brother
Case 2 (firm followed for two years)		Daughter	
Case 3 (firm followed for three years)	Father	Son	
Case 4 (firm followed for three years)	Father	Son	Sister
Case 5 (firm followed for two years)	Father	Son	Brother
Case 6 (firm followed for three years)	Father	Son	Brother

Yin (2009) state that randomization is not a necessity in selecting case studies. Our cases were therefore strategically selected bearing in mind the relevant theoretical background (Patton and Applebaum 2003; Yin 2009). Several criteria were taken into account, namely that the successors were not initially chosen to take over the family business, that they were engaged in promising careers, that they were performing well professionally, that the company was a small family business, that it was solely owned and managed by a single family, and that it operated in a traditional sector of activity and had had positive growth in the last five years. By growth we mean increased turnover and increased number of employees and diversification (new products or new services) or reorganization (new branches). Our objective was to limit—as far as possible—contingency criteria. For this kind of research there is no ideal number of cases (Yin 2009). Eisenhardt (1989) does however suggest a range from 4 to 10 cases. Researchers have to select cases in an iterative way to compare the findings until the incremental improvement is minimal (Eisenhardt 1989) or there is a saturation of insights. With this in mind, we retained six cases for our research.

Data Collection. Data were collected through semi-structured interviews and two external readers reviewed the questions to ensure their clarity. It was also collected from secondary sources (balance sheets, brochures, activity reports, family business histories, company website, articles in local newspapers, and videos of the successors participating at symposiums on the transfer of family firms). Additional data were added from *in situ* observation (i.e., company visits and meetings).

The data collection period lasted several years. With regard to the interviews, each one lasted approximately 2.5 hours and was guided by structured questions for data collection. The successors were interviewed every four months on average (the respect of timing was dependant on the successors work load and the time of the year), the predecessors and siblings of the successors were interviewed once or twice during the period of study. In some of the cases, the predecessor as well as his/her siblings were interviewed. Table 1 presents a complete overview of the interviewees and the length of the study for each company.

The questions were developed based on a literature review of family firm succession, the succession process, and the context within which it takes place. The interview guides were semi-directive and were developed successively for each phase of the research. The visits to the companies allowed the researchers to remain on good terms with the different actors but still to keep the distance required for analysis. Indeed, the creation of a relationship of trust has proved to be a good gauge of the quality of the information that was gathered. Based on the theoretical framework, the original interview guide was made up of four parts:

- (1) company context: history, number of generations, values, vision, mission, and firm growth before and after succession (turnover, number of employees, and diversification or reorganization).
- (2) successor profile: course of study (specialization, international experience, or important points), professional experience (sector, number of years, team management, functions, and responsibilities), professional development (rapid, ambitious,

etc.), career path (vision, strategy, objectives, and ambitions), entrepreneurial spirit (risk taking, innovation, and project implementation), marital status (relationship with spouse, number of children, etc.), and financial situation.

- (3) succession process (from the point of view of all the successors and from the point of view of other family members implicated): triggers of the succession, motivations to succeed, time for reflection (for the successors), postures of the successor and the predecessor, succession planning, implementation, relationships between members of the families involved, new strategic direction for the company, organizational changes, and disengagement of the predecessor.
- (4) family context: family history, family values and traditions, relationships between members of the family, career paths of the brothers and sisters, and other family elements.

In addition, we created an observation grid using these same elements.

Data Analysis. All interviews were carried out by researchers, recorded (with their permission) then transcribed. Once the interviews were transcribed, the research team discussed impressions in addition to comparing field observations and notes. The themes that structured the interview guides provided us with keys for the thematic analysis and allowed us to begin to explore the different underlying logics. The researchers then summarized the information from each interview into a grid according to the topics presented previously. Six separate, extensive case studies were elaborated from the data gathered from primary and secondary sources. The case descriptions were written independently of each other in order to respect the required rigour and to be coherent with the logic of replication (Yin 2009). In order to improve internal validity, we presented our analysis to the respondents for discussion, then we triangulated data (primary and secondary sources). We analyzed the data with no preconceived notions about whether it would refute or support previous findings in the literature. Finally, the data were examined for issues that had previously been addressed in literature, leading to suggestions for areas of future research.

Presentation of the Cases. Our research sample covers small companies of between 10 and 200 employees, with management teams made up of only family members. At the time of the data collection, the participants were actively managing their family businesses either on their own or with a sibling (cases 1, 4, 5, and 6). In all six cases, the father was the previous head and owner of the business. Succession implied the transfer of both leadership and ownership. The ages of the successors in the six companies were very similar: they took over the business before the age of 40 (in keeping with findings by Vera and Dean 2005, in the literature). All the successors were married, with only one of them not having children. None of them was the eldest child in their family. Businesses were located in metropolitan areas either in France and in Canada (Quebec). The business activities varied from auto repair to the building and insurance sectors. The age of the companies varied from 33 to 70 years. The average organization size was 13 employees before succession and 51 employees afterwards—at the date of our research (proof of firm growth). Additional details regarding the characteristics of the family businesses under study are provided in Table A (see Appendix).

Results

We present our results in such a way as to understand the profiles of the successors, why, and how they came back to the family firm.

Why?

Successor's Profile. None of the successors in the sample intended to take over the family company. They were all well educated and had decided on careers that diverged from the family business; they were successful in their chosen careers. By the time of the succession, each had over 10 years professional experience (except for case 4), with progressively increasing responsibility and management experience. They had reached the level of general management in their respective organizations (see Table 2).

Why Return to the Family Firm?. Contextual Events. In the research sample, all the predecessors had reached retirement age. In cases 1 and 2, the parents (predecessors) also had health problems and were unsuccessfully trying to sell their businesses (perhaps because they

Table 2
Successor's Profile

	Gender	Age	Job	Responsibilities	Remarks
Case 1	Male	40	University lecturer responsible for the university's training department.	He managed programmes for 500 students each year, coordinating a team of approximately 40 teachers.	
Case 2	Female	38	Director of purchasing and logistics in a large SME, then assistant director of the company	Member of the Board of Directors	Her rapid progress was all the more remarkable in light of the male-dominated company culture.
Case 3	Male	36	Consultant in the largest consultancy practice in France. Then CEO of a company.	Responsible for the management of investment funds	Parliamentary assistant during his university studies. He studied at ESSEC, a prestigious French business school as well as studying history in London. He had a passion for philosophy.
Case 4	Male	37	Full-time pharmacist	Purchased his own pharmacy	
Case 5	Male	39	Insurance broker, number 2 of the office.	Specialized in "life science insurance"	
Case 6	Female	40	Associate director of corporate accounts in a bank		Graduated with a degree in communications and business. Left her family home at 18 to study in another town and to gain independence.

lacked a real desire to sell). In cases 4, 5, and 6, one child was chosen to be the successor but a sibling (our interviewee) came back to the family firm either by invitation, or because they were more confident about growing the family business than the chosen successor (on his or her own).

In cases 1, 2, and 3, the successors were unhappy in their current jobs although they

had been successful. A few years before taking over the family firm, successor 1 handed in his notice as head of department at the university due to the destructive internal quarrels and limited his work exclusively to teaching. The buy-out of her company by an Italian group led to the termination of the successor 2's contract. Before 30, successor 3, a former French rugby champion, suffered from two heart attacks

(linked to his work schedule). In each case, the successor was led to reflect on their future professional path.

Motivations of the Successors. Emotional Aspect. Successor n°1 wanted to avoid the decline of the family company that had played an important role in his family life when he was young and still had a good local reputation. The emotional aspect of the takeover was very important for this successor. He was also sincerely worried about the survival of his father, his only remaining parent, who was faced with the sale of the company. For cases 4, 5, and 6, the opportunity of sharing management of the family firm with a brother or sister was the prime motivation. In each case, the children already had part ownership, justifying their role as decision-makers, but they were not actively involved in the firm. They remedied this by taking part in the company's operations. In each case, the successor's decision meant that the firm remained in the family.

Financial Aspect. Case 1 was the only one where the taking over the family business resulted in the improvement of the successor's financial situation and the quality of life for himself, his wife, and his children. For case 2, earning satisfactory revenues and at the same time gaining real recognition whether from the family or outside were motivating factors. This successor also wanted to be financially independent, and therefore personally independent (from her husband).

Entrepreneurial Spirit. For successor 2, the succession provided the opportunity for personal fulfillment: to have more autonomy and to manage a team that she created. Successor 3 had an entrepreneurial spirit and the need for challenge and competition. Even when he was an employee of a large consultancy, he moved up the ranks faster than usual and was given the responsibility of managing an investment fund before moving to become CEO of a company in the communication sector. He felt he had succeeded and could not take the company any further. A heart attack triggered his thinking about his future and the need to change direction. His father, close to retirement, had been looking for a buyer for his company for the three years. For this successor, the family takeover was both a solution for a calmer life and a challenge to do better than his father.

Succession Process

In each case, the decision to take over the family firm was made quickly (in three to six months). The speed with which the decisions were taken can be explained by the small size of the firms. The transfers of leadership and ownership of the companies were spread over periods from six months to a year, but in some of the cases, the parents stayed in the company longer in support or mediator roles, no longer controlling operations (cases 4, 5, and 6).

Successor n°1 (and his brother) bought the company from his father, rather than receiving it via a donation. This decision was motivated by the successor's desire to obtain total freedom of action and to increase his legitimacy. Successor 1 made considerable changes following the succession. In this case, it was important to create distance within the relationship predecessor-successor. The father was a trained mechanic and used traditional management methods. The successor, on the other hand, was a first and foremost a manager, skilled in marketing and sales. The risk of disagreement between father and son was high and represented a threat to the implementation of the planned changes. In addition, a poor relationship between the brother (co-manager) and the father had the potential to create a difficult triangular relationship. Despite these misgivings, once the company was purchased and the brothers had "settled" into its management, the father remained (without a defined role) to help in the company.

Successor n°2 wanted as little accompaniment as possible as she wished to take over the company without having to report to anyone. Moreover, she wanted to avoid offending her parents with the changes she intended to execute (notably implementation of new administration and management methods). She expedited the transition due to the poor health of her father and the potentially negative image that a long transition could generate with clients and employees. In the context of the succession, she did not want to be considered "the daughter of . . .", and she wanted to impose her mark on the company personnel as fast as possible.

Successor n°3 was very attached to his parents. He first shared his decision to become involved with the company with his mother (in charge of the administration) to get her reaction. He also discussed his project with his sister. It was only then that he announced his intention of taking over the family business. His condition for taking over the company was to have total

liberty to develop the company using his own methods. His father remained at his side, in a supporting role, so the son could benefit from his operational experience and experience managing within changing contexts.

Successor n^o4 inherited ownership of half the family firm. His sister was designated as the successor but as she only held half the shares, she asked him to come and learn about the firm because as co-owner he had an important role to play in strategic decisions. He worked part-time at first, and then decided to stay and to take over the leadership. For him, the family business was a game. He could play and win or lose. At the beginning, his motivation was to make more money than his father—to be better than him. Following the succession, his father thought that his son was going too fast. The father remained in the firm because the brother and the sister did not get along well. He played a mediator role, and he was his daughter's confidant.

Successor n^o5 was also invited to join the firm by his sibling. His brother, the eldest in the family, was already working in the firm and designated as the only successor but he did not feel able to grow the business. He needed his brother, who was more confident and possessed more managerial skills (whereas the original successor preferred selling insurance). A condition of the ultimate successor before joining the family firm was that he be the sole boss and maker of strategic decisions. Despite the “environmental pressure” for the oldest child to be the successor, the younger successor obtained what he wanted. The father remained with the company despite the fact he no longer held any shares. He retained his office and played a role maintaining employee relations, becoming the confidant of the new management.

Successor n^o6 was in conflict with her father from the age of 18. She declared that she would never work in the family firm. Her oldest brother was designated to be the successor, but when he became the manager (and owner), he found he needed someone experienced in finance and communication. His sister perfectly matched the job description. Because their father was still in the firm, it required long discussions with both father and brother to establish a basis upon which she was prepared to join the family firm. She was motivated by the job, appreciated the team she formed with her brother and as a result assumed responsibility for the continuation of the family firm.

How Did the Successors Manage the Family Firm?

In our analysis, we focused on the strategic vision of the successors so as to better understand their development objectives for their family firms. It appears that one of the conditions for assuming the role of successor, when it has not been foreseen, is to meet the challenge of growing the business. None of the successors in our sample wanted to manage the family business if the status quo at the time of the succession were to be maintained. They wanted to do better, perhaps to continue the progression they knew in their previous careers. They wanted to be recognized for the results they obtained, for their entrepreneurial accomplishments. It was a way to distance themselves definitively from their previous roles of son or daughter of the former company director (see Table 3 for changes in the firms, postsuccession).

Discussion

In this discussion, we emphasize on the differentiating elements: how are these successors different from the others who are designated and trained by their predecessor? We then highlight the elements we think are the key success factors for unexpected successions.

Motivations for an Unexpected Successor to Return to the Family Firm

Professional Reasons. In all the cases, the successors had moved up the professional hierarchical ladder quickly but they knew, at the time of their decision to return to the family business, that continued progress in their field would no longer be as easy. The possibility of joining the family firm was perceived as a career opportunity above all because they had the feeling of having reached a certain level in their careers outside of the family business. The possibility of growing the business attracted them and fits with Sharma and Irving's (2005, p. 23) observation: “*family business successors will exhibit levels of calculative commitment to pursuing a career within the family business when they perceive their family business to be of significant financial value.*” The succession further provided an opportunity to the successor to continue to progress at his/her own rhythm, by his/her own choice, to be his/her own boss, and to personally benefit from what they had already acquired through previous experience. What is more, all these successors

Table 3
Strategies Deployed by the Successors and Results Obtained

	Development Objective	Main Changes	Results	Father Present
Case 1	Opening of a 2nd site Launching new services	Organisation and HR methods Implementation of new procedures Communication methods	2 hires Turnover grew by 15 percent in one year	Yes
Case 2	Reconquering the market	More aggressive sales strategy Development of partnerships Diversification	3 hires Turnover doubled within four years	No
Case 3	Growth Being a major player in the region	Relocation New and larger markets New equipment Change of image and corporate culture	160 hires in two years. Turnover multiplied by 8	Yes
Case 4	Growth of customer base, acquisitions	Management methods New markets, strategic decision for acquisitions → new managers responsible for the subsidiary New management methods New markets	50 hires in three years. Turnover doubled	Yes
Case 5	Being number one Growth of customer base	New management team	61 hires in two years. Turnover multiplied by 4	Yes
Case 6	Stabilize family firm image, growth	Firm organization chart, quality label, new markets	Staff and turnover doubled.	Yes

were at an age when individuals tend to rethink their lives, and taking over a family firm could have been seen as an opportunity to do make desired changes, with power and merit (Frishkoff and Down, 1993; Rosenblatt et al. 1985). Finally, the successors felt free to impose their way of managing: *"I like and respect my father but I am not my father! I think, that the fact of have been external allows me to [fully] appreciate what he did but to manage the company as I see fit"* (case 5).

Personal Reasons. This succession opportunity also resonated with strategic and psychological issues tied to the successors' family values and education (Kets de Vries, Carlock, and Florent-Treacy 2007; Ward 1987). First, taking over the company represented the opportunity to "save" it, to ensure the continuity of the family business, and in some cases to help his/her (in some cases worn out) parents (Astrachan and Jaskiewicz, 2008; Lumpkin, Martin, and Vaughn 2008). Second, though the successors went into careers that differed from those of their parents, they were socialized within the family business (Cadieux 2007). They knew the family firm and several of its stakeholders, and this facilitated their thinking. It can be argued that they received an informal, social education about the family business from their early childhood. They spent their holidays in and around the company so they knew the environment of the family firm, how it functioned, its qualities and weaknesses. Many family meals were occasions to discuss the various problems of the company. The parents' networks, and even those of the children, were linked to the company: *"My father often invited his clients and suppliers to dinners at our home. We became friends with a lot of people linked directly or indirectly to the company"* (case 6). Even when they were far removed from the company and had other preoccupations, their knowledge of the sector led them to collect information, to keep up to date informally, or even unconsciously. It meant that the succession was almost without "surprises." They already had an extensive knowledge of both the internal and external environment and "merely" needed to apply the development models that appeared the most appropriate to them; without paying the price of a steep learning curve and all its associated errors. *"It was after the succession that I realized that it's as if I had been in this sector all my life . . ."* (case 1). It is important to

mention that the fact that they did not feel "obliged to takeover" the family firm allowed successors to uncouple their choices from *"emotional and familial constraints"* (case 4) and to be more objective when taking their decision to return. In the same way, as they had experienced professional success outside of the family firm, they did not have to work for it and were thus at the same level as the predecessors, in a position *"to negotiate between adults"* (case 6).

Entrepreneurial Reasons. The common thread between these six cases is an agreement to succeed their fathers, coupled with ambitions for the company and a real autonomy. Strong growth was targeted from the outset by each of the successors. This fits with the literature on family succession: the heirs have been around, they are experienced, and are well placed to apply their knowledge to the family business (Sharma and Smith 2008). All the successors observed in this research, aided by their legitimacy, felt free to break routine and introduce considerable changes in the organization with the aim of improving efficiency and creating growth for the company: *"As soon as I took over the company, I made a number of important changes to achieve growth. I made use of competences already present in the company to develop new services and go into new markets"* (case 6). Clearly, their previous management experience allowed the successors to obtain results quickly, re-enforcing their legitimacy (Milton 2008). Furthermore, the fact that the predecessors recognized the competences of the successors and supported the implementation of their innovations helps to reduce any potential resistance to change among the employees and ultimately rallied employees around them. As a result, successors were also able to implement a second phase of more ambitious proactive strategies, taking more risks and innovating further but with the support of the organization. Our results show that the successors in our examples had entrepreneurial skills and could all be qualified as new leaders according to the categories of Garcia-Alvarez, Lopez-Sintas, and Gonzalvo (2002): they were ambitious, they took over to carry out big projects, and they did not reuse the approach of their predecessors: *"If I took over the family business, it was to develop and make money quickly"* (case 1).

It is worth pointing out that this is in no way contrary to the literature on strategy in family

business that insists on the continuity between parent and child (Hall, Melin, and Nordqvist 2006) as well as on growth that is coherent in the context of the family culture (Lansky 2009). What was new in our research in comparison with the literature was that the results that these successors achieved were excellent no doubt because they seized the opportunity to take over the family firm in a proactive way. They did not wait to be trained by predecessors but entered the succession process in an entrepreneurial way. The family successors wanted to achieve growth, as they had in their previous roles. They knew how to approach it and what to do.

Key Factors for Managing an Unexpected Succession

Planification/Preparation. The literature shows that planning is a key success factor for successions. Without in any way promoting the absence of preparation, our cases show that even when it is not planned long term, a succession can be successful. Diverging from the recommendations made in previous studies (Christensen 1953; Lansbeg, 1988; Sharma, Chrisman, and Chua 2003; Ward 1987), in our cases it was the successors who were the actors and the project managers of the process. Moreover, these cases showed that the succession resulted from a series of negotiations between the predecessor and the successor: *“My father wanted me to join the family firm and I was keen to do so, however I had conditions and we reached an agreement”* (case 5). *“Taking over the family firm was above all a [process of] negotiation. We negotiated the price, my role, my father’s role and the role of my brother. We also negotiated the strategic changes to make and the support of my father in making them”* (case 5). The roles of the successors in these succession processes were more important than the roles of the predecessors: successors defined the strategic plans and drew up postsuccession strategies and new visions for the company that were coherent with their drive to grow the business. These successors were not trained as long appointed successors would be (Lansbeg, 1988). However, their combination of previous knowledge of the firm (socialization from childhood) and their rich professional experience together made up their training.

Behaving as an Entrepreneur. Unlike the cases presented in the literature where the successor—designated by the predecessor—

has spent all his professional life in the family firm and is under the successor’s control, with respect to the management of the family firm (Sharma, Chua, and Chrisman 2000; Ward 1987), the heirs we studied were independent adults for a long time before they joined the company. As a result, they could not be treated as children by their parents, parents who were older and relatively close to the end of their careers as company directors. The successors’ decisions to return may have been taken quickly but they were well thought through and little was left to chance. For all of them, the succession became their first choice for this phase of their professional lives as well as being an important professional challenge: *“taking over the family firm was taking a big risk because I needed to leave behind my career which, by the way, was going well and I would not have done it if I had not been able to innovate and make the changes I wanted”* (case 5).

With regard to prior work experience and education, our results agree with the literature on the desire of successors to look elsewhere for accomplishment (Sharma and Irving [2005], to prove themselves outside of the family business: *“I wanted to prove myself elsewhere, to show that I could succeed in a company where I was not the boss’s son”* (case 5). Succeeding in a professional capacity outside of the family firm made them legitimate upon their return (Ward 1987). The employees did not know the successors, or had forgotten them; so even if they were still “the son, or daughter, of,” they were above all perceived as being managers with an ambitious project for the company. All the successors had good, even brilliant, university backgrounds, and in addition they had more than 10 years of solid work experience with constant upward progression. This experience gave them the ability to manage projects and teams effectively: *“Working outside the family firm has allowed me to develop more quickly than I would have elsewhere and I no longer feel guilty about not working in the family firm”* (case 4). The experience outside the family firm equipped them to take over the company and its employees professionally and efficiently, but it also enabled them to bring in new ideas built on their experience of how things were done elsewhere (Danco 1982).

These successors therefore entered the company with much more freedom of action than their traditional counterparts. It appeared easier for them to take responsibility for

decisions that were in contradiction to the ones that their parents would have taken. “*When I came into the family firm to help my brother, and also my father, I knew I had something to bring to this family. My experience in my previous job would be useful both in terms of management and strategy*” (case 5). None had previously worked in the same sector as that of the family company, but the sectors where they had worked were almost all highly competitive. Their expectations were high, and they were used to working under pressure with the obligation of obtaining results. In each case, the transition of the successor to the role of company manager was relatively easy as he/she already had occupied managerial positions. Though family context made the situation different from what they had previously experienced, the total independence allowed each successor to move rapidly.

A Factor for Internal Stability that Facilitated Change. After having negotiated the conditions under which they would take over the firm, the successors felt free to put in place their new strategies supported by legitimacy, experience, the network of contacts, and the predecessors themselves. The predecessors became the catalysts of organizational change within the family firm. As the successors were competent, the predecessors accepted their growth projects that generated impressive results (see Table 2). Although our outcomes support the literature on changes undertaken by educated heirs (Sharma and Smith 2008), in our cases, the successors took the lead, becoming promoters of change with the predecessors playing the role of guardians of organizational cultural and stability. The growth of the company was then good due to a seemingly contradictory fact: “*taking a step back, I realize that we innovated within the [existing] tradition. By this I mean that my father maintained the values, the traditions and the best practices of the company. He also played the role of confidant to the employees and coached them during the implementation of the changes I proposed. On my side, my sector knowledge and my experience outside the company allowed me to identify several business opportunities and to put in place innovations*” (case 5).

Cases of family small and medium-sized enterprises (SMEs) taken over by people who are external show that despite changes in strategy, management, and a real desire

for growth, the results are not always as expected and can even lead to bankruptcy (Chalus-Sauvannet and D’Andria 2007). These failures can be explained by a lack of organizational socialization: the new external managers are missing important keys to understanding the specific context materialized by the family firm. Unlike these external managers, the successors in our cases have two complementary competences: external experience (acquired outside of the family firm) and internal knowledge of the family firm itself; in addition they have the legitimacy, network, advice, and support of the predecessors.

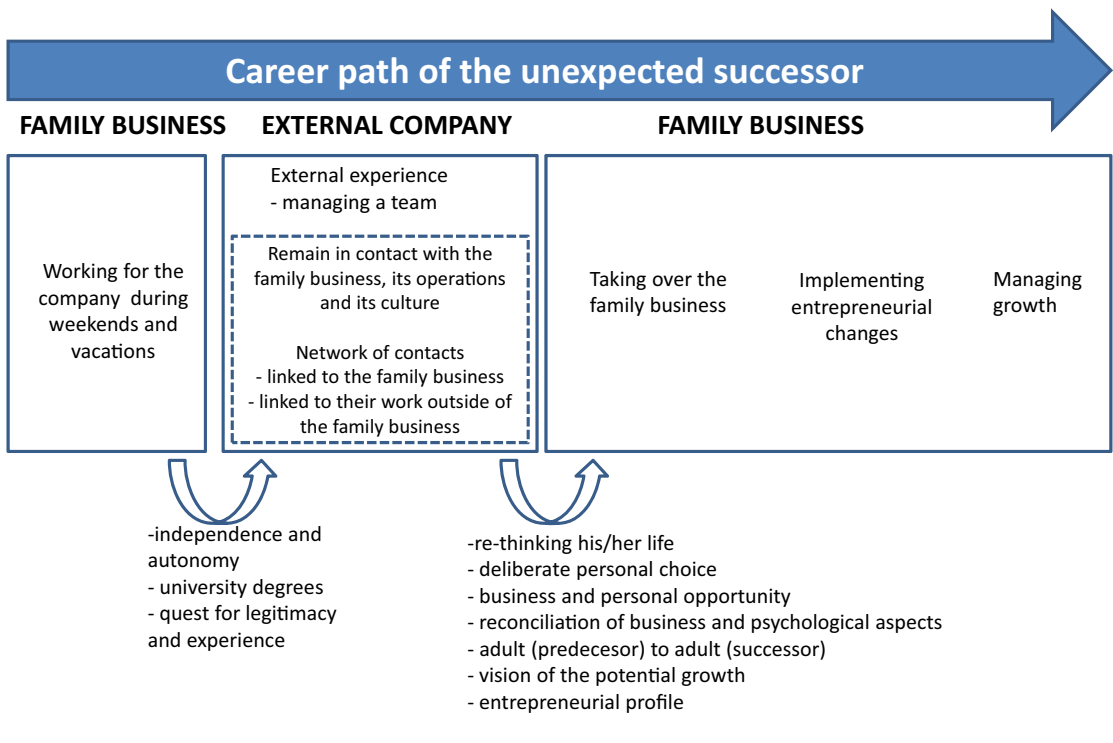
Figure 1 summarizes the paths of these unexpected successors. It shows their progression, from their first steps within the family businesses, their time spent outside of the family firms up to the takeovers, the changes they made to grow the business and their management of the SMEs’ growth.

Conclusion

This exploratory study examines the trajectories of six family business successions. As the successors studied here were not in line for succession (they abandoned a “bright future” to return to the family firm), we have brought to light the motivations that lead them to the succession, and the way that these successions were conducted.

We explain the success and the growth of these family companies after the succession by heirs, who were not initially foreseen, by the following: (1) they benefit from having had successful professional and personal careers far from the family business as well as from internal exposure to the family company that provides numerous advantages when taking over (social preparation, culture, long-term orientation of the family, shareholders, coherence of the value system, connection between the family and the company, and a lesser need for complex external financing). (2) The succession is a deliberate personal choice and is completely assumed; they are not pushed into it or forced into it by convention. (3) Their profile and the situation of an unforeseen succession place them as legitimate leaders. They see the management and the development of the family business as a compensation for abandoning a promising career. (4) The fact that the takeovers resulted from negotiations put them in the position of adults on the same level as the predecessors. (5) They act as entrepreneurs

Figure 1
Path Career for the Unexpected Successor



by being proactive about deciding to succeed their fathers, taking risks, detecting new business opportunities; they can move beyond the family routines and do not hesitate to innovate. (6) Finally, they implement their changes drawing support from support of their predecessors to avoid destabilizing the organization.

Limitations of the Study

Our research is rich in details and descriptions; however, as this study is based on a small sample, it means that our model cannot be generalized to all family firms. We can also question the longevity of these entrepreneurs. It might be the case that, being so dynamic and having already succeeded in other environments, they will outgrow their family businesses after a while. Despite the fact that three companies are French and three are Canadian, we did not find any significant cultural differences in terms of the career path of unexpected successors. Indeed, the successions followed the same trajectories in all the cases under study. This does not mean there are no cultural

differences within the companies. On the contrary, there are cultural differences in terms of management in French and Canadian companies. The absence of cultural differences in career path can then be explained by the fact that all our cases concern successions in small family businesses. That said, further research is needed to better understand this point.

Directions for Future Research

This study has to be nuanced in the sense this it is clearly not advising family firms: *“don’t prepare the succession and you will succeed.”* Nevertheless, the findings are relevant to parents who are owners of family businesses as it could be that the solution to their succession lies with their children, even if they have left the family firm. It can also be useful for successors who seek to make a change in their lives. Indeed, considering succession within the family firm as a career opportunity allows the child to see the company in a different light. Finally, the study can provide useful information to structures that accompany family busi-

nesses, as it provides more insight into these atypical successors so that the advisor can better respond to expectations, specifically those of the predecessor. However, to refine its usefulness, there is a need to go into more depth, notably with regard to decision triggers. The stakes involved in being able to successfully accomplish a “last minute” internal transmission of a family owned company are high, with all that that implies for the organization during the transition. Moreover, it would be useful to follow these companies for a longer period in order to analyze the link between the profiles of these managers and long-term company growth.

References

- Allouche, J., and B. Amann (2000). “L’entreprise Familiale un État de L’art,” *Finance Contrôle Stratégie* 3(1), 33–79.
- Astrachan, J. H., and P. Jaskiewicz (2008). “Emotional Returns and Emotional Costs in Privately Held Family Firms: Advancing Traditional Business Valuation,” *Family Business Review* 21(2), 139–149.
- Bagby, D. R. (2004). “Enhancing Succession Research in the Family Firm: A Commentary on toward an Integrative Model of Effective FOB Succession,” *Entrepreneurship: Theory and Practice* 28(4), 329–333.
- Barnes, L. B., and S. A. Hershon (1976). “Transferring Power in the Family Business,” *Harvard Business Review* 54(4), 105.
- Birley, S. (1986). “Succession in the Family Firm: The Inheritors View,” *Journal of Small Business Management* 24(3), 36–43.
- (2002). “Attitudes of Owner-Managers’ Children towards Family and Business Issues,” *Entrepreneurship Theory and Practice* 26(3), 5–19.
- Brockhaus, R. H. (2004). “Family Business Succession: Suggestions for Future Research,” *Family Business Review* 17(2), 165–177.
- Cadieux, L. (2004). La succession dans les entreprises familiales: une étude de cas sur le processus de désengagement du prédécesseur. Thèse de Doctorat, Université du Québec à Trois-Rivières, Trois-Rivières, QC, 268 p.
- (2007). “Succession in Small and Medium-Sized Family Businesses: Toward a Typology of Predecessor Roles during and after Instatement of the Successor,” *Family Business Review* 20(2), 95–109.
- Cadieux, L., J. Lorrain, and P. Hugron (2002). “Succession in Women-Owned Family Businesses: A Case Study,” *Family Business Review* 15(1), 17–30.
- Casillas, J., and F. Acedo (2007). “Evolution of the Intellectual Structure of Family Business Literature: A Bibliometric Study of FBR,” *Family Business Review* 20(2), 141–162.
- Chalus-Sauvannet, M. C., and A. D’Andria (2007). Réalités et difficultés de l’entrée à la socialisation organisationnelle du repreneur», le numéro spécial «Conduites de repreneuriat» de la *Revue Economies et Sociétés Série K Economie de l’entreprise*, Vol. 41, Janvier 2007. 121–144.
- Chittoor, R., and R. Das (2007). “Professionalization of Management and Succession Performance—A Vital Linkage,” *Family Business Review* 20(1), 65–79.
- Christensen, C. (1953). *Management Succession in Small and Growing Entreprises*. Boston: Division of Research, Harvard Business School.
- Chua, J. H., J. J. Chrisman, and P. Sharma (2003). “Succession and Non-Succession Concerns of Family Firms and Agency Relationship with Non-Family Managers,” *Family Business Review* 16(2), 79–107.
- Creswell, J. W. (2002). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Thousand Oaks, CA: Sage Publications.
- Danco, L. (1982). *Beyond Survival*. Cleveland, OH: The University Press.
- De Massis, A., J. Chua, and J. J. Chrisman (2008). “Factors Preventing Intra-family Succession,” *Family Business Review* 21(2), 183–199.
- De Noble, A., S. Ehrlich, and G. Singh (2007). “Toward the Development of a Family Business Self-Efficacy Scale: A Resource-Based Perspective,” *Family Business Review* 20(2), 127–140.
- Diwisch, D., P. Voithofer, and C. Weiss (2009). “Succession and Firm Growth: Results from a Non-Parametric Matching Approach2,” *Small Business Economics* 32(1), 45–56.
- Eisenhardt, K. M. (1989). “Building Theories from Case Study Research,” *The Academy of Management Review* 14(4), 532–550.
- Frishkoff, P. A., and B. M. Brown (1993). “Women on the Move in Family Business,” *Business Horizons* 36, 36–66.
- Garcia-Alvarez, E., J. Lopez-Sintas, and P. S. Gonzalvo (2002). “Socialization Patterns of

- Successors in First to Second Generation Family Businesses," *Family Business Review* 15(3), 189–203.
- Gersick, K., J. Davis, M. McCollom Hampton, and I. Lansberg (1997). *Generation to Generation: Life Cycles of the Family Business*. Boston, MA: Harvard Business School Press.
- Hall, A., L. Melin, and M. Nordqvist (2006). "Understanding Strategizing in the Family Business Context," in *Handbook of Research on Family Business*. Eds. P. Z. Poutziouris, K. X. Smyrniotis, and S. B. Klein. Cheltenham, UK: Edward Elgar, 253–269.
- Handler, W. C. (1990). "Succession in Family Firms: A Mutual Role Adjustment Between Entrepreneur and Next-Generation Family Members," *Entrepreneurship Theory and Practice* 15(1), 37–51.
- Hillier, D., and P. McColgan (2009). "Firm Performance and Managerial Succession in Family Managed Firms," *Journal of Business Finance & Accounting* 36(3–4): 461–484.
- Ibrahim, A. B., K. Soufani, and J. Lam (2001). "A Study of Succession in Large Family Firm," *Family Business Review* 15(3), 245–258.
- Kepner, E. (1983). "The Family and the Firm: A Co-Evolutionary Perspective," *Organization Dynamics* 12(1), 57–70.
- Kets de Vries, M. F. R., R. S. Carlock, and E. Florent-Treacy (2007). *Family Business on the Couch: A Psychological Perspective*. West Sussex: John Wiley & Sons, Ltd.
- Lambrecht, J. (2005). "Multigenerational Transition in Family Businesses: A New Explanatory Model," *Family Business Review* 28(4), 267–268.
- Lansberg, I. (1988). "The Succession Conspiracy: Mapping Resistance to Succession Planning in First Generation Family Firms," Working paper, Yale School of Organization and Management.
- Lansky, D. (2009). "Money and Meaning," *Journal of Practical Estate Planning* 11(1): 5–59.
- Le Breton-Miller, I., D. Miller, and L. P. Steier (2004). "Toward an Integrative Model of Effective FOB Succession," *Entrepreneurship theory and practice* 28(4), 305–328.
- Longenecker, J. G., and J. E. Schoen (1978). "Management Succession in the Family Business," in C. Aronoff, J. Astrachan, and J. Ward, *Family Business Sourcebook II*, Georgia: Omnigraphics Inc., 87–92.
- Lumpkin, G. T., W. Martin, and M. Vaughn (2008). "Family Orientation: Individual Level Influences on Family Firm Outcomes," *Family Business Review* 21(2), 127–138.
- McCollom, M. (1990). "Problems and Perspectives in Clinical Research on Family Firms," *Family Business Review* 3(2), 245–261.
- McGivern, C. (1978). "The Dynamics of Management Succession," *Management Decision* 16, 32–46.
- Matthews, C. H., T. W. Moore, and A.-S. Fialko (1999). "Succession in the Family Firm: A Cognitive Categorization Perspective," *Family Business Review* 12(2), 159–169.
- Mazzola, P., G. Marchisio, and J. Astrachan (2008). "Strategic Planning in Family Business: A Powerful Developmental Tool for the Next Generation," *Family Business Review* 21(3), 239–258.
- Mickelson, R., and C. Worley (2003). "Acquiring a Family Firm: A Case Study," *Family Business Review* 16(4), 251–268.
- Milton, L. (2008). "Unleashing the Relationship Power of Family Firms: Identity Confirmation as a Catalyst for Performance," *Entrepreneurship Theory and Practice* 32(6), 1063–1081.
- Patton, E., and S. H. Applebaum (2003). "The Case for Case Studies in Management Research," *Management Research News* 26(5), 60–72.
- Rosenblatt, P. C., L. de Milk, R. M. Anderson, and P. A. Johnson (1985). *The Family in Business: Understanding and Dealing with the Challenges Entrepreneurial Families Face*. San Francisco, CA: Jossey Bass.
- Royer, S., R. Simons, B. Boyd, and A. Rafferty (2008). "Promoting Family: A Contingency Model of Family Business Succession," *Family Business Review* 21(1), 15–30.
- Ruspini, E. (2002). *Introduction to Longitudinal Research*. London: Routledge.
- Schulze, W. S., M. H. Lubatkin, R. N. Dino, and A. K. Buchholtz (2001). "Agency Relationships in Family Firms: Theory and Evidence," *Organization Science* 12(2), 99–116.
- Sekaran, U. (2003). *Research Methods for Business*, 4th ed. Hoboken, NJ: John Wiley & Sons.
- Sharma, P. (2004). "An Overview of the Field of Family Business Studies: Current Status and Directions for the Future," *Family Business Review* 17(1), 1–36.

- Sharma, P., and G. Irving (2005). "Four Bases of Family Business Successor Commitment: Antecedents and Consequences," *Entrepreneurship Theory and Practice* 29(1), 13–33.
- Sharma, P., and Smith, B. (2008). "Ed's Dilemma: Succession Planning at Niagara Paving," *Entrepreneurship: Theory and Practice* 32(4), 763–774.
- Sharma, P., J. H. Chua, and J. J. Chrisman (2000). "Perceptions about the Extent of Succession Planning in Canadian Family Firms," *Revue Canadienne des Sciences de l'Administration* 17(3): 233–244.
- Sharma, P., J. J. Chrisman, and J. H. Chua (2003). "Succession Planning as Planned Behavior: Some Empirical Results," *Family Business Review* 16(1), 1–15.
- Sharma, P., F. Hoy, J. H. Astrachan, and M. Koiranen (2007). "The Practice-Driven Evolution of Family Business Education," *Journal of Business Research* 60(10), 1012–1021.
- Stavrou, E. T. (1998). "A Four Factor Model: A Guide to Planning Next Generation Involvement in the Family Firm," *Family Business Review* 11(2), 135–142.
- Stavrou, E. T., and P. M. Swiercz (1998). "Securing the Future of the Family Enterprise: A Model of Offspring Intentions to Join the Business," *Entrepreneurship Theory and Practice* 23(2), 19–39.
- Vera, C. F., and M. A. Dean (2005). "An Examination of the Challenges Daughters Face in Family Business Succession," *Family Business Review* 18(4), 321–345.
- Ward, J. L. (1987). *Keeping the Family Business Healthy: How to Plan for Continuing Growth, Profitability, and Family Leadership*. San Francisco, CA: Jossey-Bass.
- Ward, J. L., and C. E. Aronoff (1990). "To Sell or Not to Sell," *Nation's Business* 78(1): 63–64.
- Yin, R. K. (1989). *Case Study Research. Design and Method*. Beverly Hills, CA: Sage Foundation.
- (2009). *Case Study Research Design and Method*. Thousand Oaks, CA: Sage Publications.

Table A
Firm Characteristics at the Time of the Takeover

	Case 1 France	Case 2 France	Case 3 France	Case 4 Canada	Case 5 Canada	Case 6 Canada
Industry	Garage, motorway breakdown service	Garage	Building	Construction	Insurance	Renovation in construction
Number of employees	10	10	19	150	19	45
Date of creation	1960	1974	1948	1938	1978	1927
Turnover at take over	€1.6 million	€600 K	€1.7 million	€15 million	€9 million	€15 million
Sales coverage	Regional	Regional	Regional	Regional	National	Regional
Generation	2nd	2nd	3rd	3rd	2nd	3rd

Cultural Convergence in Emerging Markets: The Case of McDonald's in China and India

by Hyo Jin (Jean) Jeon, Brinja Meiseberg, Rajiv P. Dant[†], and Marko Grünhagen

It is a truism that successful organizations of any type adapt and conform to the idiosyncracies of their target consumer groups as it is their customers that embody their raison d'être. This is especially important for small businesses and entrepreneurial enterprises because they lack the requisite experiential treasure trove or elaborate corporate bureaucracies to accomplish this task typically available to established large firms. In fact, textbooks on international business are full of examples of business failures when consumer proclivities have been ignored by businesses. Informed by this admonition, this manuscript seeks to investigate the psyche of Chinese and Indian consumers of a global franchise system, McDonald's. It advances the premise of cultural convergence of Chinese and Indian consumers through the lenses of organizational socialization theory. We examine whether the franchise system's universal culture and the social values of egalitarianism and democratization enshrined in the system are linked to consumers' patronage of McDonald's in the world's two largest emerging markets. Using multivariate analysis of variance, we evaluate cross-country differences in perceptions of egalitarianism and democratization as well as patronage frequency. Both country-specific effects and cross-cultural effects are discussed, and managerial implications for franchisee-entrepreneurs in each country are outlined.

Introduction

Aggressive government-driven economic reforms in the BRICS economies (that is Brazil, Russia, India, China, and South Africa) have provided many business opportunities for global firms that have been well accepted among consumers. Over the past decades, both practitioners and scholars have endeavored to better understand the dynamics of the marketplace in emerging economies (Bao,

Zhou, and Zhou 2006; Cui and Liu 2001; Eckhardt and Mahi 2004; George and Zahra 2002; Kreiser et al. 2010; Lau 2011; Tan 2002). Yet, the discourse on promising business strategies in such markets has mainly focused on exploiting labor market opportunities, despite the substantial risks associated with entry for the expanding firm (Isobe, Makino, and Montgomery 2000; Johnson and Tellis 2008; Pan and Chi 1999; Steensma and Lyles 2000). Moreover, previous literature has often

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overlooked the rapid growth of the consumer market. In this study, we extend the knowledge of the influence of societal factors on consumer behavior in emerging markets by examining the two largest BRICS markets, China and India. Because these two countries' population alone comprises one third of the world population, an understanding of Chinese and Indian consumers' behaviors toward global firms can provide insightful implications for the design and adaptation of global organizations' business strategies in emerging economies.

As already alluded to in the abstract, it is a truism of conducting successful business that organizations (be they small businesses, new entrepreneurial enterprises or established large conglomerates) adapt and conform to the specific makeup of their target consumer groups as it is their consumers who justify their existence. This is particularly critical for small businesses and entrepreneurial enterprises as they often lack experience or corporate know-how to accomplish this task typically available to established large firms. Businesses that operate in the global arena frequently fail when culture-specific consumer proclivities have been ignored. With this stricture in mind, we attempt to delve into the psyche of the Chinese and the Indian consumers of a global franchise system, namely, McDonald's.

China and India are no longer simply cheap manufacturers of global goods but have transitioned to become major players on the world stage. After Deng Xiaoping's economic reforms and open-door policies, the Chinese government has been actively attracting many global organizations (Ahlstrom and Bruton 2002; Bao, Zhou, and Zhou 2006; Wang, Zhu, and Terry 2008). The Indian market opened in 1991 and has become more willing to cooperate and integrate with the world economy since its economic reforms of the 1990s (Budhwar 2001; Wang 2008).

Though global organizations may come at a price, they bring foreign capital into the host countries that can boost employment and economic growth. However, global organizations are also often viewed as "Trojan horses" of foreign culture and values that conflict with or even damage the local culture and values. For instance, Meunier (2000), who quoted *Le*

Monde Diplomatique, declares that "McDonald's red and yellow ensignia is the new version of America's star-spangled banner, whose commercial hegemony threatens agriculture and whose cultural hegemony insidiously ruins alimentary behavior-sacred reflections of French identity" (pp. 104–116).

Investigating cultural convergence among consumers in India and China in the context of a global franchise firm (in this case, McDonald's) is particularly appropriate from an entrepreneurship perspective. Not only has franchising been characterized as one of the fastest growing U.S. exports (House Committee on Small Business 1990) and types of retailing (Dant, Perrigot, and Cliquet 2008) in the world, but it also provides one of the most efficient means of spreading entrepreneurship to developing parts of the globe with little experience in business creation (e.g., Dana, Etemad, and Wright 2002; Hoffman and Preble 2004). Franchisees as entrepreneurs (e.g., Baucus, Baucus, and Human 1996; Combs, Ketchen, and Short 2011; Grünhagen and Mittelstaedt 2005; Hoy and Shane 1998; Kaufmann and Dant 1999; Shane and Hoy 1996) are in a unique position as representatives and conduits of their global brands vis-à-vis consumers while simultaneously acting as semi-independent business owners. Hence, providing an understanding of patronage behavior in emerging markets is not only important for the franchisor and its positioning efforts, but even more critical for those that represent the interface to their consumers on behalf of the global brands, that is, the franchisee-entrepreneurs. Additionally, the review of international retail franchising over the last three decades notes the urgent need of academic research to better understand the phenomenon of international retail franchising in emerging markets (Welsh, Alon, and Falbe 2006).

Foreign cultures and values that are brought by global organizations can also have a desirable impact on local cultures and values: based on the theory of organizational socialization, consumers are presented with opportunities to adopt the attractive aspects of organizational cultures and values and to mirror organizational images to consumers' self-concepts by patronization.¹ George Ritzer, a sociologist who

¹Here, "culture" is used to refer to the enduring set of values of a nation, a region, or an organization (George and Zahra 2002).

studied how cultures and values of an organization can influence the society, developed the McDonaldization theory to rationalize the impacts an organization such as McDonald can have on the society (Ritzer 1996).² He argued that the spread of McDonaldization is a vehicle for many organizations and societies in the world to experience American culture, which allows them to realize “any viable alternative on the world stage” (Ritzer 1996, p. 299). For example, the cleanliness of McDonald’s outlets in Hong Kong and Taipei has served as a catalyst to improve sanitary standards in many local restaurants (Turner 2003; Yan 1997). Additionally, the self-service culture of McDonald’s is being well assimilated, as Indian or Chinese consumers are becoming used to standing in line to order food and to pick up their trays themselves. That is, both entrepreneurs and consumers in emerging countries can adopt “positive” organizational culture and values from global organizations, which can overall contribute to changing the dynamics of the marketplace in emerging countries.

This study seeks to investigate how consumers’ demographic characteristics are related to evaluations of the universal culture and values (i.e., egalitarianism and democratization) enshrined in a global franchise brand like McDonald’s, and how consumers’ perceptions and attitudes are subsequently related to patronage behavior at McDonald’s in the world’s two largest emerging markets, China and India. Specifically, we address the following research questions: (1) are perceptions toward organizational culture influenced by consumers’ backgrounds (i.e., age and education)? (2) Is the egalitarian and democratic organizational culture of a globally operating organization related to consumers’ patronization of such a global brand?, and (3) do these consumption behaviors vary across Chinese and Indian consumers?

We build upon previous research on the influence of consumer culture on global organizations’ business strategies in emerging markets (Ahlstrom and Bruton 2002; Cui and Liu 2001; Eckhardt and Mahi 2004; George and Zahra 2002; Kreiser et al. 2010; Puffer, McCarthy, and Boisot 2010; Tan 2002; Yiu and Lau 2008; Zhao et al. 2011), in particular, with respect to socio-

cultural values and cultural convergence of individuals (Au and Kwan 2009; Mitchell et al. 2002; Stewart, May, and Kalia 2008). Our contributions to the literature are as follows: first, we propose and test relationships between consumer and organization identification for both Chinese and Indian consumers. Second, we focus on the characteristics of Chinese and Indian consumers that shape and reinforce the process of organizational socialization. Third, we provide managerial implications for positioning strategies of global franchise firms and their franchisee-entrepreneurs in BRICS markets by analyzing the cross-cultural patronization of McDonald’s.

In the following sections, we introduce the concept of organizational socialization and consumer–organization identification to develop hypotheses that are subsequently tested using correlations and multivariate analysis of variance (MANOVA) analyses. We conclude with an interpretation of findings and managerial implications.

Theoretical Framework

Theory of Organizational Socialization and Consumer–Organization Identification. Socialization is the process of social cohesion (Van Maanen and Schein 1979). For example, when a new employee enters into an organization, the employee learns his or her roles and the often tacit “rules” to adjust to the new environment (Van Maanen and Schein 1979). Through organizational socialization, the employee acquires historical and cultural knowledge of the organization that consists of jargon, customs, norms, values, and philosophy (Louis 1980; Van Maanen and Schein 1979). Organizational socialization can also apply to other stakeholders. Stakeholders of an organization learn, adopt, and share the organization’s characteristics (e.g., cultures, climate, and values) through the process of social cohesion (Dowling 1986; Ralston et al. 2008). Consumers can derive (parts of) their self-identity from relevant characteristics enshrined in the focal organizations’ culture and values, and they can equate individual identities to organizations’ social identities (Ashforth and Saks 1996; Feldman 1981; Van Maanen and Schein 1979). This sense of identity—that is established by

²He defined McDonaldization as “the process by which the principles of the fast-food restaurant are coming to dominate more and more sectors of American society, as well as of the rest of the world” (p. 293).

consumption behavior—has become a notable element in our society (Sheth, Newman, and Gross 1991). As the New York University anthropologist Angela Zito explained, “in our society now, so much is built around consumption of things and advertising, [that] a lot of people find a sense of community around the things that they buy” (Fowler 2011).

There are three reasons why consumers are motivated to compare and subsequently align organizational culture and self-identity: (1) identity similarity, (2) identity distinctiveness, and (3) identity prestige (Bhattacharya and Sen 2003). First, when consumers find similarity in an organization’s identity to their respective self-identity, they are more likely to buy products and services from this organization as the organization’s identity enables and facilitates these consumers’ expressions of self-identity. Second, a distinctive identity of an organization tends to charm consumers. As individual consumers, to some extent, strive to distinguish themselves from others, they tend to advance their creation of distinctive self-identities through organizational socialization. For example, the *Get a Mac* campaign by Apple was based on differences in characteristics assigned to Mac users and to PC users, and Apple appealed to its target consumers by stressing the unique values of Apple (Belk and Tumbat 2005; Muniz and O’Guinn 2001). Third, consumers may seek opportunities to enhance their self-identity through patronizing a company with a prestigious identity. For example, consumers’ desires toward creating a distinctive identity for themselves are often demonstrated by conspicuous consumption behavior (Amaldoss and Jain 2005). That is, consumers may believe that values of prestigious brands carry over to them, and thereby, their possession of prestigious brand items creates a prestigious identity (Sheth, Newman, and Gross 1991). Hence, consumers satisfy self-definitional needs through the process of social cohesion by aligning their self-identity with their perception of a company’s identity (Bhattacharya and Sen 2003; Chernev, Hamilton, and Gal 2011; Mael and Ashforth 1992).

Based on this theoretical stream, consumers may construct their self-identities in line with characteristics represented by a successful and popular global franchise company like McDonald’s (e.g., Alon 2004). Once they are attracted by the organization’s characteristics, they may develop consumer–organization identification.

For example, the American cultural icon, McDonald’s, in Beijing, not only introduces consumers to new Western foods, but also to new dining etiquette. When McDonald’s first opened in China, consumers left their rubbish on the table and let the employees do the clean-up (Watson 1997; Yan 1997). However, over time, the Chinese consumers have learned to throw out their own trash, because by adopting this procedure, they tend to feel highly “civilized” compared with other Chinese consumers (Watson 1997). In fact, in China, consumers have been found to view someone who patronizes McDonald’s as a distinctly “civilized” person, “like a Westerner” (Watson 1997). Accordingly, consumer–organization identification can fulfill consumers’ desire to express self-identities, to distinguish themselves from other Chinese, or to enhance self-worth (Bhattacharya and Sen 2003). Moreover, Chinese consumers’ behaviors symbolically reveal their willingness to accept the foreign culture associated with Western brands, or get involved in cross-cultural interaction in general (Yan 1997). A similar pattern of behavior has occurred among Indian consumers. In short, consumer socialization of a global franchise system like McDonald’s will influence the demand patterns of Chinese and Indian consumers, and small businesses and entrepreneurial enterprises have to respond to the changes that are implemented by McDonald’s in the marketplace.

Hypotheses

Effects of Age & Egalitarianism. “Equality” carries a range of meanings and connotations (Persky 2008), and entrepreneurs across marketplaces have experienced disadvantages related to their respective gender, social class, and religion. For instance, minority women have been continuously challenged in the labor market because of racism and sexism tendencies (Haddleston-Mattai 1995; Reskin and Roos 1990; Smith-Hunter and Boyd 2004). Even in developed nations and in highly qualified professional settings, studies have shown that females generally earn less than equally qualified males due to gender discrimination (Bell, Randall, and Williams 1995; Fasci and Valdez 1998). However, the introduction of franchising in the marketplace has strongly underpinned an “egalitarian ethos” by providing opportunities and freedom in the marketplace also to otherwise less privileged

individuals (Bates 1995; Hunt 1978). That is, regardless of their gender or ethnicity, franchisee-entrepreneurs are less likely to experience inequality in the marketplace as franchise systems offer some “protection” to their franchisee-entrepreneurs simply by providing them with anonymity (Bates 1995; Hunt 1978). In other words, consumers’ choices to select a particular franchised fast-food restaurant depend little on the gender or racial identity of the local service provider (i.e., the franchisee-entrepreneur, who often remains unknown to the consumer), but on the organization’s identity, so a more egalitarian ethos is promoted.

However, it would of course be naïve to suggest that Chinese and Indian consumers would fully embrace egalitarian values that are delivered by global franchise systems like McDonald’s. Different generations in China and India may have different attitudes toward an egalitarian culture. Younger generations in both China and India have witnessed the transition of social values after their governments adopted a more open-market model of economy. The younger generations are also generally believed to be more affluent and adept with using modern technologies that allow them to access information about foreign countries that may have enjoyed a more egalitarian ethos in their societies and have experienced economic prosperity for a longer period of time. Therefore, it seems more likely that the younger generation would support and adopt the values of the relatively new concept of egalitarianism than the older generation. This leads us to suggest:

H1a: The younger the age of the Chinese consumers, the greater the support for the sentiment of egalitarianism represented by McDonald’s.

H1b: The younger the age of the Indian consumers, the greater the support for the sentiment of egalitarianism represented by McDonald’s.

Democratization. Democratization refers to the movement of an anti-authoritarian political structure in a society. Many postmodern social scientists have argued that an important role played by capitalism is the democratization of a society (Eisenstadt 1999; Pascale and Maguire 1980). Authoritarian governments in

emerging markets can be softened and weakened by foreign organizations’ entries following the introduction of capitalism (Robertson 2001). The Chinese government had long been reluctant to allow a global brand like McDonald’s, a symbol of Western capitalism, to enter into the Chinese market. However, due to the idealization of Western products, brands, and consumption patterns by the Chinese, public demand prevailed in the end (Robertson 2001), translating into the exponential growth that both leading Western fast-food brands, KFC and McDonald’s, have experienced since their entry into the China market (for a review of KFC’s early growth, see Dana 1999a).

In the beginning of Deng Xiaoping’s economic reforms, the eagerness for development and modernization were directly related to consumers’ desires and demand for foreign goods (Yan 1997). So, early movers like KFC and McDonald’s have benefited from Chinese consumers’ attraction to the foreign culture they symbolize (Turner 2003; Watson 1997; Yan 1997). In India, following the introduction of the English language during the British rule of the country, there has been a segment of the population that was already quite “Westernized” in its mindset. With the economic liberalization in India starting in 1991, this segment has grown exponentially, especially within the younger age groups. In India, more than 50 percent of the population are below the age of 25 and more than 65 percent are below the age of 35 (Chakrabarti and Cullenberg 2003); McKinsey estimates that by 2025, India’s middle class, which is becoming used to Western culture fast (Saxena 2010), will increase to almost 600 million people (McKinsey Global Institute 2007). We expect that younger generations in these two BRICS markets will recognize and appreciate the democratized culture that is symbolized by McDonald’s more than older generations. Thus,

H2a: The younger the age of the Chinese consumers, the greater support for the sentiment of democratization represented by McDonald’s.

H2b: The younger the age of the Indian consumers, the greater support for the sentiment of democratization represented by McDonald’s.

Effects of Education & Egalitarianism. Classical economists believe that people are capable of making “rational” choices in the marketplace if everyone has equal opportunities to receive education (Peart and Levy 2005; Persky 2008). In the United States, the increase of women’s education led the women’s liberation movements of the late 1960s and 1970s, and women’s roles within the family as well as in society have subsequently changed (Fan and Marini 2000; Shu and Marini 1998). Women’s postsecondary education has also been found to be strongly related to their egalitarian attitudes toward gender and empowerment (Mason, Czajka, and Arber 1976; Thornton and Freedman 1979; Thornton, Alwin, and Camburn 1983). As the early political theorists have argued, fair and equal opportunities for education drive a more egalitarian society and more opportunities of education available to individuals may lead them to be more open toward equality (Kamens 1988). Accordingly, the effects of education in developed nations are expected to be replicated in the two BRICS markets: as consumers are granted increasing opportunities to receive higher education, these more sophisticated Chinese and Indian consumers should value an egalitarian culture that is enshrined within the concept of franchising. Hence,

H3a: The higher the level of education of the Chinese consumer, the greater the support for the sentiment of egalitarianism represented by McDonald’s.

H3b: The higher the level of education of the Indian consumer, the greater the support for the sentiment of egalitarianism represented by McDonald’s.

Democratization. Early political theorists, such as Locke, Mill, and Aristotle argued that education socializes individuals and society to be more democratic minded (Wells 2008). Social scientists have examined the relationship between education and civic skills of individuals (Pallas 2006). Chinese and Indian consumers who have received higher education may be more likely to understand and value the role of democratization for advancing their societies than the less educated consumers. Moreover, its consumers may quickly recognize that at McDonald’s, every consumer is basically treated alike—everyone waits in the same line

to order food, carries their tray to a chosen table, and cleans up the table after he or she has finished eating. Therein, elements of a democratic culture are represented by business concepts like the McDonald’s model, and these elements may be both noted and supported particularly by those consumers who have come to share a more democratic ethos than by consumers who are less familiar with democratization views and the potential positive effects of democratization on a society. Therefore:

H4a: The higher the education level of the Chinese consumer, the greater the support for the sentiment of democratization represented by McDonald’s.

H4b: The higher the education level of the Indian consumer, the greater the support for the sentiment of democratization represented by McDonald’s.

Identification Effects. One of the central non-economic functions of consumption is to express individual consumers’ values. Self-identity is not deterministic, but individuals choose, negotiate, and integrate social identities to represent their identities (Swann and William 1987). Thus, individuals can shift among different identities to search for and to find a desirable self-definition (Abrams and Hogg 2006; Hogg and Abrams 1988). As a part of their identity formation, individuals tend to patronize organizations that they support to meet their self-definitional desires (Erez and Early 1993)—judging also from the advertised organizational images, and depending on how these are perceived and interpreted by the individuals (Dutton, Dukerich, and Harquail 1994; Scott and Lane 2000). Simultaneously, consumers engage in a self-construction process to define themselves by analyzing who and what they are. For example, consumers may socially identify with a particular organization, because they define both themselves and that organization as supporting a common cause (Scott and Lane 2000).

Consumers patronizing McDonald’s, an iconic brand for U.S.-based franchise systems, may socially identify with that organization because they define both themselves and McDonald’s as supporters of egalitarian and democratic culture and values. For example, Paswan and Kantamneni (2004) found that

Indian consumers tend to patronize franchising brands when they believe that those franchise systems promote the well-being of franchisee-entrepreneurs. Then, consumers should be more likely to patronize such global franchise systems, as they identify themselves as being aligned with the values that are delivered by the brand. Especially, consumers in emerging markets may view those foreign franchise systems that introduced and subsequently promoted a more egalitarian or democratic ethos in their marketplace as market pioneers and may particularly tend to establish social cohesion through consumer–organizational identification. Chinese and Indian consumers, who welcome and support the egalitarian and democratic culture and values represented by foreign franchise systems like McDonald's, may therefore patronize such systems more often. Thus,

H5a: The greater the support for the sentiment of egalitarianism represented by McDonald's among Chinese consumers, the greater the patronage of McDonald's.

H5b: The greater the support for the sentiment of egalitarianism represented by McDonald's among Indian consumers, the greater the patronage of McDonald's.

H6a: The greater the support for the sentiment of democratization represented by McDonald's among Chinese consumers, the greater the patronage of McDonald's.

H6b: The greater the support for the sentiment of democratization represented by McDonald's among Indian consumers, the greater the patronage of McDonald's.

Methodology

Sampling Procedure

The empirical results are based on a sample survey of 642 Chinese consumers and 450 Indian consumers carried out in the capital cities of Beijing and Delhi. The contextual setting of the survey was the respondents' perceptions related to McDonald's operations in China and India, respectively.

In the Chinese case, the survey instrument, initially developed in English, was translated by a native Chinese marketing academic into Chinese, and then back-translated by a different native Chinese speaker into English, following

established translation and back-translation procedures (cf. Brislin 1970). Adjustments were made throughout the translation process to ensure that the back-translated version resulted in identical meaning across all items compared with the original English version. The Indian version of the questionnaire was administered in English with some minor adjustments for British spellings as opposed to the American spellings.

The surveys were conducted on an individual intercept basis in both China and India and also by a snowball sampling approach in China. Under the first approach, data collection was initiated at various public places in Beijing and Delhi such as train stations, public squares, parks, and shopping malls using the help of Chinese and Indian college students. The students were involved in selecting and prequalifying the respondents (*only individuals who had patronized a McDonald's in the past were qualified as potential respondents*). The qualified respondents were given the questionnaire attached to a clipboard. The completed questionnaires were subsequently collected by the students. An explicit effort was made not to involve students or professors of the institutions that participated in the data collection. In India, 100 percent of the surveys were collected in this fashion. In China, the first half of all the collected surveys was obtained from such publicly accessible sites. The second half of data collection was done through a snowball sampling approach, that is, students were asked to distribute surveys to relatives and nonstudent acquaintances provided they qualified on the required protocol of having eaten at a McDonald's in the past. On average, three individuals had to be approached for every respondent who ended up completing these surveys.

Measures. Age and education (in terms of post high school education) are measured in years. Frequency of visit is measured by respondents' annual visits to eat at McDonald's. The appendix presents the series of latent items utilized in this research. The measures were provided with a five-point Likert-type response anchors ranging from strongly disagree = 1 to strongly agree = 5. Hence, in each case, larger values indicate greater importance or greater agreement associated with the scale statements. The latent construct measures (i.e., egalitarianism and democratization) were adapted from

Table 1
Correlations

Correlations ^{a,b}					
	Age	Education	Egalitarianism	Democratization	Frequency of Visit
Age ^c	1.000	-0.062	0.129***	0.031	-0.100**
Education ^d	0.057	1.000	-0.055	-0.104**	0.024
Egalitarianism	-0.083*	-0.057	1.000	0.237***	-0.062
Democratization	0.018	0.092*	0.473***	1.000	-0.120**
Frequency of Visit ^e	-0.207***	-0.009	-0.100**	-0.076	1.000

^aChina data above the diagonal, India data below.

^bSignificance levels: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$ (two-tailed).

^cAge is measured in years.

^dEducation is measured in the number of years of post high school education.

^eFrequency of Visit is measured by respondents' annual visits to eat at McDonald's.

pedigreed literature sources (i.e., Spence and Hahn 1997, and King and King 1997, respectively) where they had undergone rigorous psychometric scrutiny (see the Appendix for a listing of a complete set of scale items employed in this research). In both cases, the core ideas were taken from the original sources of scales and adapted to a franchising context. Scale reliability was assessed by computation of composite reliabilities (C.R.) and yielded supportive estimates. These were for democratization, C.R. = 0.79 for China; C.R. = 0.82 for India and for egalitarianism, C.R. = 0.84 for China; C.R. = 0.83 for India. When factors were analyzed using confirmatory procedures, all factor loadings were found to be highly significant, which indicates convergent validity (Bagozzi, Yi, and Phillips 1991; Homburg, Droll, and Totzek 2008). Convergent validity of a research instrument can be assessed by three measures: item reliability, construct (composite) reliability, and average variance extracted (Fornell and Larcker 1981). We obtained the following average variance extracted (AVE) values: for democratization, AVE is 0.43 for China, 0.47 for India; for egalitarianism, AVE is 0.63 for China, 0.62 for India. We then proceeded to evaluate the discriminant validity of the measures as prescribed by Fornell and Larcker (1981). Discriminant validity is evident when the square root of the AVE is larger than the correlations of other measures (the smallest square root of

AVE is 0.66, which exceeds all correlation coefficients; see Table 1) or when the square of the correlations is less than the AVE (Fornell and Larcker 1981). Therefore, we conclude that discriminant validity is not a concern with our measures.

Because we collected self-reported data from a single source, there are concerns of common method bias (Kreiser et al. 2010). The study controls for common method bias in the self-reported variables using Harman's single factor test. The test yielded more than one factor, and no factor accounted for a majority of variance. In two factor solutions of democratization and egalitarianism, in India (China) the total variance explained by the two constructs was 36.08 percent (41.52 percent); the variance explained by the largest eigenvalue was 21.54 percent (31.16 percent). Thus, according to Podsakoff, MacKenzie, and Lee (2003), common method bias is not an issue, either.

Results

Regarding the results of this study, our statistical analysis is intended to provide some exploratory analyses of consumers' support of egalitarianism and perceptions of democratization in the context of a global franchise brand's organizational culture in the two largest emerging markets. We focus on individual attributes that are hypothesized to be related to these

perceptions, as well as on the relation of these perceptions to individual buying behaviors in terms of the frequency of patronage of the brand.

We predicted that both Chinese and Indian consumers would show negative relationships between age and support for egalitarianism (H1a and H1b) and democratization (H2a and H2b). However, the relationship to egalitarianism (H1a), contrary to our *a priori* prediction, is significantly positive, suggesting that older Chinese consumers rate higher on supporting the concept of egalitarianism than the younger Chinese. However, the relationship between age and support of egalitarianism for Indian consumers (H1b) is found to be negative, as predicted. The result indicates that older Indian consumers have weaker preferences for egalitarianism than young ones. These diverging findings document significant differences between the two countries' consumers with respect to the relation between age and support of an egalitarian concept as represented by franchised brands—age is related to egalitarian views in a significantly negative fashion in India, yet in China, the relation is significantly positive.

H2a and H2b suggested that the relationship between age and democratization would be negative for Chinese and Indian consumers. However, correlations do not show any supportive evidence, as the relationships are statistically nonsignificant (Table 1).

We had also argued that highly educated consumers in China are more likely to support egalitarianism (H3a) and democratization (H4a); H3b and H4b argued for parallel effects for the case of India. The data show a significantly positive relationship between education and perceptions of democratization for India, supporting H4b. However, there are nonsignificant relationships as regards H3a and H3b, and contrary to our expectations presented in H4a, education is significantly negatively linked to Chinese consumers' assessments of democratization embodied in the McDonald's culture (Table 1). Thus, there are again significant differences between the two countries' consumers, here, with respect to the relationships between education and democratization perceptions in the context of global franchised brands.

H5a and H5b proposed that if consumers' support of egalitarianism is high, consumers will patronize McDonald's outlets more often,

which is not supported for either country. Though H5a (for China) is found to be statistically nonsignificant, the directionality of the coefficient shows that holding egalitarian views reduces (rather than increases, as predicted) patronage at McDonald's in China. The same holds for India, and here, the link is even statistically significant. H6a and H6b suggested that those consumers with a greater perception of democratization would patronize McDonald's with greater frequency in both countries. However, consumers' patronage of McDonald's decreases (significantly in China, insignificantly in India) as the notion of democratization finds more support (Table 1).

Table 2 displays descriptive statistics and multivariate analysis of variance (MANOVA) results, presenting more detailed country-specific results. The MANOVA results and each of the following analysis of variance (ANOVA) comparisons yielded highly significant effects, suggesting that consumers' sentiments and perceptions regarding egalitarianism and democratization in the two BEMs are remarkably different, supporting our correlations-based findings (Table 1). These differences persist even in terms of demographic characteristics of age and education, and patronage frequency of the consumers. Compared with Chinese survey participants, Indian participants are older and more educated. As correlation results indicate that relationships between age and supporting egalitarian views, and between education and perceptions of democratization, diverge in the two countries, these differences are, needless to say, exacerbated by the significant differences in consumers' age and educational sophistication. That is, older and more educated consumers in *India* seem to hold rather conservative views on egalitarianism (i.e., they show low support for egalitarian views), but they seem to score high on democratization perceptions associated with the franchised brand concept of McDonald's. In a distinct pattern, in *China*, older but less educated consumers tend to support both egalitarian views and democratization perceptions.

Both the means for support of egalitarianism and perceptions of democratization inherent in franchised brands are significantly higher in China than in India, a noteworthy finding for firms planning the creation and promotion of organizational images for franchised brands in these markets. Moreover, the surveyed

Table 2
MANOVA Results

Comparison of Means							
MANOVA	Wilks' Lambda Converted to			$F_{(5, 752)} = 40.635$		$p < 0.001$	
	Variable	Country	N	Mean	Std. Dev.	F	p-value
ANOVA	Age	China	553	35.52	12.71	54.31	$p < .001$
		India	345	42.90	15.32		
ANOVA	Education	China	553	3.80	2.10	55.00	$p < .001$
		India	345	4.93	1.65		
ANOVA	Egalitarianism	China	553	3.98	0.73	27.99	$p < .001$
		India	345	3.71	0.54		
ANOVA	Democratization	China	553	4.20	0.78	63.51	$p < .001$
		India	345	3.78	0.62		
ANOVA	Frequency of Visit	China	553	41.73	63.04	27.58	$p < .001$
		India	345	22.27	38.25		

$N = 898$ (cases with incomplete data are excluded from this analysis).

individuals' patronage frequency for the focal brand studied here is nearly twice as high in China as in India, indicating that the McDonald's brand concept enjoys better prospects in some markets than in others which, in turn, shows the significance of taking national sentiments and cultural preferences into account, as trying to expand globally uniform operations, as many franchised brands do, may not allow tapping the brand's full potential across culturally different market environments.

Findings and Implications

Stimulated by the globalization and a growing awareness of consumer ethnography and socio-linguistics (Alden, Steenkamp, and Batra 2006; Au and Kwan 2009; Douglas and Craig 1997; Ozsomer and Simonin 2004; Steenkamp and Hofstede 2002; Stremersch and Tellis 2004; Van Ittersum and Wong 2010), interest in studying the cultural context of business strategies has increased considerably. Previous research has pointed out the need to look beyond how organizations do business within their country's borders to examine how organizations can proactively shape their environments, with a particular focus on culture's role in that activity (Ahlstrom and Bruton 2002; Yiu and Lau 2008). Such context-dependent analyses are particularly pertinent in light of

the uniqueness of emerging markets whose circumstances differ markedly from those of developed economies (Puffer, McCarthy, and Boisot 2010; Zhao et al. 2011). Furthermore, as outlined earlier, the franchise context provides a particularly salient environment as franchisee-entrepreneurs are the very visible "face" of the global franchise system in the host market, and thus play a critical role in the shaping of consumer perceptions.

However, previous literature has often overlooked the central importance of the *consumer market*. This study attempts to better understand how consumers' personal characteristics in China and India are related to the socio-theoretical constructs of democratization and egalitarianism through a consumer-organization socialization process lens. This study, therefore, makes several contributions to our understanding of positioning strategies for global brands as well as managerial insights for franchisee-entrepreneurs in emerging markets.

First, relationships between consumer age and egalitarianism support in the two BRICS markets vary. In China, the older consumers are more likely to support egalitarian views in the context of choosing a franchised restaurant, even though younger generations are typically assumed to be more open to new

concepts. The finding may be caused by different brand perceptions associated with McDonald's across the generations in China (Eckhardt and Houston 2001; Varman and Belk 2009): though older Chinese consumers value the egalitarian culture inherent in the franchised business model, young consumers, being more individually minded than previous generations, may not be as sensitive toward egalitarian elements and, accordingly, toward the values that are supported by applying a franchised brand's concept as McDonald's does. That is, older consumers, who witnessed the dramatic social changes after China's economic reforms in the 1980s and subsequent accelerated economic development (Grünhagen, Dant, and Zhu 2012), are more likely to support egalitarianism in business models than the young Chinese consumers who may be oblivious to this tumultuous transformation of their society.

In India, however, younger consumers are more supportive of egalitarianism than older consumers. India's constitution abolished social discrimination stemming from the caste system, gender, and religion in 1950; however, the caste system in India is still deeply entrenched in Indian customs and values related to Hindu culture (Deshpande 2001). Hence, it appears that the open-market economy and ongoing social development have a positive effect on the younger Indian consumers to learn about and support egalitarian values being established in the marketplace by operations like McDonald's.

Second, whereas the relationship between education and democratization is significantly positive in India, it is significantly negative in China. The result for India supports prior studies in developed nations that examine the relationship between the level of received education and democratization views (Wells 2008). More educated Indian consumers appear to be more appreciative of the democratized service culture offered by McDonald's and its franchisee-entrepreneurs, where all consumers receive the same treatment (Dash 2005). It would seem that the more educated Indians, who are also more likely to be familiar with the social issues inherent in the former caste system, understandably perceive McDonald's democratic culture more positively.

However, the result for China provides interesting insights in Chinese consumers' perceptions of McDonald's. Educated Chinese

consumers do not perceive McDonald's service culture as being particularly democratic, which may mean that McDonald's does not meet the more sophisticated Chinese consumers' expectations on strong democratic ethos.

Third, the relationship between egalitarian ideas and frequency of visit is negative in India. A potential reason might be that Indian consumers who are sufficiently open-minded to hold such egalitarian ideas, because of their open mind-set, do not tend to stick to one particular restaurant chain all the time, but they rather enjoy trying out different places and seek more variety in experiences. The absolute difference in the frequency of visits to McDonald's in India as compared with China may also be explained by the still dominant vegetarian Hindu culture of the country.

Fourth, the relationship between democratization and frequency of visit is found to be negative for China. Possibly, McDonald's consumers are less likely to construct self-images that fit in with the democratic ethos offered by McDonald's. Rather, it would seem that the Chinese consumers actually look for special treatment, as many Chinese consumers dine out at franchised restaurants for special occasions, such as birthdays, farewell parties, or Christmas (Yan 1997)—unlike for example the U.S. consumers, who seek a quick and easy meal at some McDonald's drive-through. The latter result is consistent with the notion that in today's Chinese economy, consumers in general—after many years of deprivation and being denied privileges—are actively seeking out privileges and special services, even in seemingly insignificant places like fast food restaurants, thereby to some extent opposing the idea of a “democratic” marketplace (Eckhardt and Houston 2001; Wang 2008; Yan 1997). This notion is also echoed by Dana's (1999b) assessment that McDonald's meals outside the United States are often positioned as luxury products. Consequently, a global franchise system that intentionally evokes the image of offering a democratized service culture, no matter how well-meant, may not be that successful with increasing patronage rates among consumers in some nations, as shown by the Chinese example. Besides, with regard to India, some consumers may continue to prefer a more nuanced treatment of consumers than what McDonald's currently offers them although this relationship was statistically insignificant.

In sum, the positioning strategies of global organizations in emerging markets, especially for those firms that put an emphasis on uniformity of operations, for example through means of franchising, have to be carefully differentiated. Each particular global brand may be interpreted differently among consumers, who also have different demographic backgrounds, across and within their respective emerging markets. In fact, the cultural heritage of these and other BRICS markets may not only require adapting the product offering to national tastes, as for example, McDonald's has done by introducing meals that are based on food preferences in the markets like India and China, but the transferring of the business concept and the actual provision of the brand's services need careful reconsideration when trying to launch and develop an otherwise successful concept abroad. Thus, the organization needs to carefully identify its target market in each country, channel clear messages out to local consumers about organizational culture that fit respective consumers' expectations, and adjust these messages as emerging markets and its consumers' views and attitudes may develop quickly over time. The role of the franchisee-entrepreneur in this process must not be underestimated.

In a broader sense, as franchising has been considered a business format that induces or promotes entrepreneurial activities, the findings of this study also make important contributions to the *future prospects of entrepreneurs* in China and India. This study provides a quite differentiated understanding of the dynamics of consumer markets in India and China, where Western franchise brands have been present for decades. Clearly, their appeal to different age groups paired with the underlying, yet varying support for egalitarianism and democratization by different age groups, indicates the need for distinct strategies for franchise systems—despite the public perception that McDonald's may use a globally uniform strategy.

Specifically, in China, younger consumers (as the stereotypical target of fast food franchises) are not as egalitarian-minded as their elders, countering commonly perceived notions. For franchisee-entrepreneurs, this insight may not only be surprising, but it also indicates the need to respond to younger Chinese consumers through the provision of preferential treatment in various forms, for example through loyalty perks and the like. Such offers may, on the other hand, alienate

older, more educated customers who have become accustomed to more “democratic” treatment over the past two decades. In other words, the Chinese market offers up challenges to franchisee-entrepreneurs, and the brand as a whole, that may not have existed previously.

In India, on the other hand, the “McDonaldization” of the local market place has had the effect most often assumed by casual observers of the impact of fast food establishments in emerging markets. Younger and educated consumers have grown up to appreciate egalitarian and democratic values propagated by the franchise brand. The challenge for the franchisee-entrepreneurs appears to be the newly emerging proclivity to try different restaurants as part of their customers' new “open mindset.” In other words, franchisee-entrepreneurs will have to find new ways to keep the same consumers coming back.

In sum, franchisee-entrepreneurs in both countries will have to be given the leeway by the franchise system to develop idiosyncratic and truly entrepreneurial strategies at the local level to respond to their respective country-specific challenges.

Contributions, Limitations, and Further Research

Managerially, our results offer some interesting reflections on the domain of global businesses operating in emerging markets. Essentially, our study demonstrates how cross-cultural organizational outcomes depend upon societies' cultural values (Ahlstrom and Bruton 2002; Kreiser et al. 2010; Mitchell et al. 2002), and upon consumers' socialization processes, which in turn are related to consumers' personal backgrounds.

Some scholars have proposed that globalization will lead to the creation of a “global consumer culture”; others have argued that cultures remain a very powerful influence or that consumers are “hybridizing,” “glocalizing,” or “creolizing” these global and local cultural influences (Alden, Steenkamp, and Batra 2006; Van Ittersum and Wong 2010). Over the last years, “top down” global brand adaptation has become better understood by researchers and managers. For example, Coca-Cola decided to return to a more multidomestic marketing approach when it found that its structure was insensitive to local markets. Local marketing intermediaries were permitted to develop

advertising to local consumers and, on the basis of local knowledge, could even launch new local brands (Schuiling and Kapferer 2004). Similarly, Tiger beer features exotic imagery in its United Kingdom advertising that matches the Westerners' image of Asian culture, but it features confident, modern Asian men in its domestic market (Cayla and Eckhardt 2008). Also, McDonald's overseas product offering takes local tastes and cultural or religious specifics in food consumption into account. However, consumer responses to global organizations, and to their strategies in making local appeals, may be quite different across markets, and may strongly depend on consumers' socialization processes.

In addition, managers should understand the important role of organizational structure as an element to form organization identity. As the organizational concepts employed in this study (i.e., egalitarianism and democratization) are enshrined in the business model as well as in common practices of franchise systems, both local franchisee-entrepreneurs and the overall brand can benefit from an adequate setup of organizational structure. Chen (2002) argues that consumers in China view the universal corporate identities of franchise systems as a catalyst that accelerates economic development in their marketplace. The impact of organizational culture and values has also been witnessed in Russia, another BRICS market: many young Russian consumers resist a more discriminatory service culture in Russia by patronizing McDonald's, which provides more democratized, standardized services (Turner 2003). Consumers' great demand toward such democratized services has now led many entrepreneurs in Russia to start their own franchise systems that even try to adapt parts of their organizational identities based on foreign franchise systems. Thus, global brands need to acknowledge the influence of organizational structure, culture, and values when entering into emerging markets (e.g., Grünhagen, Witte, and Pryor 2010; Johnson and Tellis 2008; Lau 2011). Also, small businesses and entrepreneurial enterprises in the local market should respond to changes of market demands that are influenced by global organizations.

We advance the literature on cross-cultural business research in three ways: first, we attract attention to organizational-consumer identification processes as underlying drivers that influence consumers' preferences for globally

known organizations. Second, previous research has often focused on a single country. Here, by choosing the important and potentially very attractive markets of India and China, we focus on the two largest emerging countries simultaneously. Third, using more than one data set for employing statistical approaches helps provide more insightful results (Calantone, Schmidt, and Song 1996) by offering opportunities to compare the applicability of results across countries. Here, we can show that BRICS markets demonstrate distinctive differences in consumer behavior in the context of organizational socialization processes.

As with every investigation, this study is not without its own set of limitations. The samples of this study were only collected from the capital cities of the two most populous and culturally diverse countries in the global market. Second, the analysis relies on self-reported survey data. To guard against the issues related to such data, we used previously validated scales whenever possible and checked for common method bias. Third, the study only considers "qualified" respondents that had actually previously patronized McDonald's restaurants. Although this prequalification was instituted to elicit informed, experientially driven consumers opinions, yet, it could be that these consumers are different from consumers that patronize other kinds of franchised establishments (both international as well as domestic ones). Hence, we recommend caution when generalizing this study's results to other sectors. Finally, as consumers travel more freely across national boundaries, countries become less separated entities and demarcation lines where one culture ends and another begins are becoming weaker than ever before (Douglas and Craig 1997). An important direction for further research may be to replicate this study in multiple cities in China and India as well as additional countries. Another worthwhile objective would be to examine longitudinal data to analyze adaptation processes over time, as well as using more sophisticated modeling techniques, for example, path analysis.

References

- Abrams, D., and M. A. Hogg (2006). "Comments on the Motivational Status of Self-Esteem in Social Identity and Intergroup Discrimination," *European Journal of Social Psychology* 18(4), 317-334.

- Ahlstrom, D., and G. D. Bruton (2002). "An Institutional Perspective on the Role of Culture in Shaping Strategic Actions by Technology-Focused Entrepreneurial Firms in China," *Entrepreneurship Theory and Practice* 26, 53–69.
- Alden, D. L., J. B. E. M. Steenkamp, and R. Batra (2006). "Consumer Attitudes toward Marketplace Globalization: Structure, Antecedents, and Consequences," *International Journal of Research in Marketing* 23(3), 227–239.
- Alon, I. (2004). "Global Franchising and Development in Emerging and Transitioning Markets," *Journal of Macromarketing* 24(2), 156–167.
- Amaldoss, W., and S. Jain (2005). "Conspicuous Consumption and Sophisticated Thinking," *Management Science* 51(10), 1449–1466.
- Ashforth, B. E., and A. M. Saks (1996). "Socialization Tactics: Longitudinal Effects on Newcomer Adjustment," *The Academy of Management Journal* 39(1), 149–178.
- Au, K., and H. K. Kwan (2009). "Start-Up Capital and Chinese Entrepreneurs: The Role of Family," *Entrepreneurship Theory and Practice* 33(4), 889–908.
- Bagozzi, R. P., Y. Yi, and L. W. Phillips (1991). "Assessing Construct Validity in Organizational Research," *Administrative Science Quarterly* 36(3), 421–458.
- Bao, Y., K. Z. Zhou, and N. Zhou (2006). "Social Alienation in a Transitional Economy: Antecedents and Impact on Attitude toward Social Reform," *Journal of Business Research*, 59(9), 990–998.
- Bates, T. (1995). "A Comparison of Franchise and Independent Small Business Survival Rates," *Small Business Economics* 7(5), 377–388.
- Baucus, D. A., M. S. Baucus, and S. E. Human (1996). "Consensus in Franchise Organizations: A Cooperative Arrangement among Entrepreneurs," *Journal of Business Venturing* 11(5), 359–378.
- Belk, R. W., and G. Tumbat (2005). "The Cult of Macintosh," *Consumption Markets & Culture*, 8(3), 205–217.
- Bell, K. S., R. F. Randall, and K. Williams (1995). "Women in Management Accounting: Determined to Succeed," *Management Accounting* 77(5), 20–28.
- Bhattacharya, C. B., and S. Sen (2003). "Consumer-Company Identification: A Framework for Understanding Consumers' Relationships with Companies," *Journal of Marketing* 67(2), 76–88.
- Brislin, R. W. (1970). "Back-Translation for Cross-cultural Research," *Journal of Cross-Cultural Psychology* 1(3), 185–216.
- Budhwar, P. (2001). "Doing Business in India," *Thunderbird International Business Review* 43(4), 549–568.
- Calantone, R. J., J. B. Schmidt, and X. M. Song (1996). "Controllable Factors of New Product Success: A Cross-national Comparison," *Marketing Science* 15(4), 341–358.
- Cayla, J., and G. M. Eckhardt (2008). "Asian Brands and the Shaping of a Transnational Imagined Community," *Journal of Consumer Research* 35(2), 216–230.
- Chakrabarti, A., and S. Cullenberg (2003). *Transition and Development in India*. London: Routledge Press.
- Chen, A. (2002). "Capitalist Development, Entrepreneurial, Class, and Democratization in China," *Political Science Quarterly* 117(3), 401–422.
- Chernev, A., R. Hamilton, and D. Gal (2011). "Competing for Consumer Identity: Limits to Self-Expression and the Perils of Lifestyle Branding," *Journal of Marketing* 75(3), 66–82.
- Combs, J. G., D. J. Ketchen, Jr., and J. C. Short (2011). "Franchising Research: Major Milestones, New Directions, and Its Future within Entrepreneurship," *Entrepreneurship Theory and Practice* 35(3), 413–425.
- Cui, G., and Q. Liu (2001). "Emerging Market Segments in a Transitional Economy: A Study of Urban Consumers in China," *Journal of International Marketing* 9(1), 84–106.
- Dana, L. P. (1999a). "Kentucky Fried Chicken," *British Food Journal* 101(5/6), 493–495.
- (1999b). "McDonald's Co. (Japan) Ltd.," *British Food Journal* 101(5/6), 496–499.
- Dana, L. P., H. Etemad, and R. W. Wright (2002). "Franchising: An Interdependent Alternative to Independent SMEs," in *Globalisation and SMEs in East Asia*. C. Harvie, and B. Lee. Cheltenham, UK: Edward Elgar, 297–310.
- Dant, R. P., R. Perrigot, and G. Cliquet (2008). "A Cross Cultural Comparison of the Plural Form in Franchise Networks: USA, France and Brazil," *Journal of Small Business Management* 46(2), 286–311.

- Dash, K. (2005). "McDonald's in India," *Thunderbird International Business Review* 47(3), 231–254.
- Deshpande, A. (2001). "Caste at Birth? Redefining Disparity in India," *Review of Development Economics* 5(1), 130–144.
- Douglas, S. P., and C. S. Craig (1997). "The Changing Dynamic of Consumer Behavior: Implications for Cross-Cultural Research," *International Journal of Research in Marketing*, 14(4), 379–395.
- Dowling, G. (1986). "Managing Your Corporate Image," *Industrial Marketing Management* 15(2), 109–115.
- Dutton, J. E., J. M. Dukerich, and C. V. Harquail (1994). "Organizational Images and Member Identification," *Administrative Science Quarterly* 39(2), 239–263.
- Eckhardt, G. M., and M. J. Houston (2001). "Cultural Paradoxes Reflected in Brand Meaning: McDonald's in Shanghai, China," *Journal of International Marketing* 10(2), 68–82.
- Eckhardt, G. M., and H. Mahi (2004). "The Role of Consumer Agency in the Globalization Process in Emerging Markets," *Journal of Macromarketing* 24(2), 136–146.
- Eisenstadt, S. N. (1999). "Multiple Modernities in an Age of Globalization," *The Canadian Journal of Sociology* 24(2), 283–295.
- Erez, M., and P. C. Early (1993). *Culture, Self-Identity, and Work*. Oxford: Oxford University Press.
- Fan, P. L., and M. M. Marini (2000). "Influences on Gender-Role Attitudes during the Transition to Adulthood," *Social Science Research* 29(2), 258–283.
- Fasci, M. A., and J. Valdez (1998). "A Performance Contrast of Male- and Female-Owned Small Accounting Practices," *Journal of Small Business Management* 36(1), 1–7.
- Feldman, D. C. (1981). "The Multiple Socialization of Organization Members," *Academy of Management Review* 6(2), 309–319.
- Fornell, C., and D. F. Larcker (1981). "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," *Journal of Marketing Research* 18(1), 39–50.
- Fowler, G. A. (2011). "Living by the Book of Apple," *Wall Street Journal* August 26, 2011. (http://online.wsj.com/article/SB10001424053111904009304576530792101313486.html?mod=WSJ_hp_LEFTTopStories). Accessed on December 27, 2011.
- George, G., and S. A. Zahra (2002). "Culture and Its Consequences for Entrepreneurship," *Entrepreneurship Theory and Practice* 26, 5–8.
- Grünhagen, M., and R. A. Mittelstaedt (2005). "Entrepreneurs or Investors: Do Multi-Unit Franchisees Have Different Philosophical Orientations?," *Journal of Small Business Management* 43(3), 207–225.
- Grünhagen, M., C. L. Witte, and S. Pryor (2010). "Effects of US-Based Franchising in the Developing World: A Middle-Eastern Consumer Perspective," *Journal of Consumer Behaviour* 9(1), 1–17.
- Grünhagen, M., R. P. Dant, and M. Zhu (2012). "Emerging Consumer Perspectives on American Franchise Offerings: Variety Seeking Behavior in China," *Journal of Small Business Management* 50(4), 596–620.
- Haddleston-Mattai, B. (1995). "The Black Female Academician and the 'Superwoman Syndrome,'" *Race Gender Class* 3, 49–64.
- Hoffman, R. C., and J. F. Preble (2004). "Global Franchising: Current Status and Future Challenges," *Journal of Services Marketing* 18(2), 101–113.
- Hogg, M. A., and D. Abrams (1988). *Social Identifications: A Social Psychology of Inter-group Relations and Group Processes*. London: Routledge.
- Homburg, C., M. Droll, and D. Totzek (2008). "Customer Prioritization: Does It Pay Off, and How Should It Be Implemented?," *Journal of Marketing* 72(5), 110–130.
- House Committee on Small Business (1990). *Franchising in the U.S. Economy: Prospects and Problems*. Washington, DC: U.S. Government Printing Office.
- Hoy, F., and S. Shane (1998). "Franchising as an Entrepreneurial Venture Form," *Journal of Business Venturing* 13(2), 91–94.
- Hunt, S. D. (1978). "Women and Franchising," *MSU Business Topics* 26(2), 25–28.
- Isobe, T., S. Makino, and D. B. Montgomery (2000). "Resource Commitment, Entry Timing, and Market Performance of Foreign Direct Investments in Emerging Economies: The Case of Japanese International Joint Ventures in China," *The Academy of Management Journal* 43(3), 468–484.
- Johnson, J., and G. J. Tellis (2008). "Drivers of Success for Market Entry into China and India," *Journal of Marketing* 72(1), 1–13.

- Kamens, D. H. (1988). "Education and Democracy: A Comparative Institutional Analysis," *Sociology of Education* 61(2), 114–127.
- Kaufmann, P. J., and R. P. Dant (1999). "Franchising and the Domain of Entrepreneurship Research," *Journal of Business Venturing* 14(1), 5–16.
- King, L. A., and D. W. King (1997). "Sex-Role Egalitarianism Scale," *Psychology of Women Quarterly* 21(1), 71–87.
- Kreiser, P. M., L. D. Marino, P. Dickson, and M. K. Weaver (2010). "Cultural Influences on Entrepreneurial Orientation: The Impact of National Culture on Risk Taking and Proactiveness in SMEs," *Entrepreneurship Theory and Practice* 34(5), 959–983.
- Lau, C. M. (2011). "Team and Organizational Resources, Strategic Orientations, and Firm Performance in a Transitional Economy," *Journal of Business Research* 64(12), 1344–1351.
- Louis, M. R. (1980). "Surprise and Sense Making: What Newcomers Experience in Entering Unfamiliar Organizational Settings," *Administrative Science Quarterly* 25(2), 226–251.
- Mael, F., and B. E. Ashforth (1992). "Alumni and Their Alma Mater: A Partial Test of the Reformulated Model of Organizational Identification," *Journal of Organizational Behavior* 13(2), 102–123.
- Mason, J. O., J. L. Czajka, and S. Arber (1976). "Change in U.S. Women's Sex-Role Attitudes, 1964–1974," *American Sociological Review* 41(4), 573–596.
- McKinsey Global Institute (2007). *The "Bird of Gold": The Rise of India's Middle Class*. New York: McKinsey & Company.
- Meunier, S. (2000). "The French Exception," *Foreign Affairs* 79(4), 104–116.
- Mitchell, R. K., J. B. Smith, E. A. Morse, K. W. Seawright, A. M. Peredo, and B. McKenzie (2002). "Are Entrepreneurial Cognitions Universal? Assessing Entrepreneurial Cognitions across Cultures," *Entrepreneurship Theory and Practice* 26(1), 9–32.
- Muniz, A. M., Jr., and T. C. O'Guinn (2001). "Brand Community," *Journal of Consumer Research* 27(4), 412–432.
- Ozsomer, A., and B. L. Simonin (2004). "Marketing Program Standardization: A Cross-Country Exploration," *International Journal of Research in Marketing* 21(4), 397–414.
- Pallas, A. M. (2006). "The Effects of Schooling on Individual Lives," in *Handbook of the Sociology of Education*. Ed. M. T. Hallinan. New York: Kluwer, 499–525.
- Pan, Y., and P. S. K. Chi (1999). "Financial Performance and Survival of Multinational Corporations in China," *Strategic Management Journal* 20(4), 359–374.
- Pascale, R. T., and M. A. Maguire (1980). "Comparison of Selected Work Factors in Japan and the United States," *Human Relations* 33(7), 433–455.
- Paswan, A. K., and S. P. Kantamneni (2004). "Public Opinion and Franchising in an Emerging Market," *Asia Pacific Journal of Marketing and Logistics* 16(2), 46–61.
- Pearl, S., and D. Levy (2005). *The "Vanity of the Philosopher": From Equality to Hierarchy in Post-Classical Economics*. Ann Arbor: University of Michigan Press.
- Persky, J. (2008). "Classical Equality on the Content of Analytical Egalitarianism," *American Journal of Economics and Sociology* 67(3), 455–471.
- Podsakoff, P. M., S. B. MacKenzie, and J. Y. Lee (2003). "Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies," *Journal of Applied Psychology* 88(5), 879–903.
- Puffer, S. M., D. J. McCarthy, and M. Boisot (2010). "Entrepreneurship in Russia and China: The Impact of Formal Institutional Voids," *Entrepreneurship Theory and Practice* 34(3), 441–467.
- Ralston, D. A., D. H. Holt, R. H. Terpstra, and Y. Kai-Cheng (2008). "The Impact of National Culture and Economic Ideology on Managerial Work Values: A Study of the United States, Russia, Japan, and China," *Journal of International Business Studies* 39(1), 8–26.
- Reskin, B., and P. Roos (1990). *Job Queues, Gender Queues: Explaining Women's Inroads into Male Occupations*. Philadelphia, PA: Temple University Press.
- Ritzer, G. (1996). "The McDonaldisation Thesis: Is Expansion Inevitable?," *International Sociology* 11(3), 291–308.
- Robertson, R. (2001). "Globalization theory 2000+: Major problematics," in *Handbook of Social Theory*. Eds. G. Ritzer and B. Smart. London: Sage Publications, 458–467.
- Saxena, R. (2010). "The Middle Class in India: Issues and Opportunities," *Deutsche Bank Research*, 1–8. (<http://www.deutschebank>)

- .co.in/jcr/pdfgen/pdf/The_middle_class_in_India.pdf) Accessed on February 28, 2015.
- Schuiling, I., and J. N. Kapferer (2004). "Real Differences between Local and International Brands: Strategic Implications for International Marketers," *Journal of International Marketing* 12(4), 97–112.
- Scott, S. G., and V. R. Lane (2000). "A Stakeholder Approach to Organizational Identity," *The Academy of Management Review*, 25(1), 43–62.
- Shane, S. A., and F. Hoy (1996). "Franchising: A Gateway to Cooperative Entrepreneurship," *Journal of Business Venturing* 11(5), 325–327.
- Sheth, J. N., B. I. Newman, and B. L. Gross (1991). "Why We Buy What We Buy: A Theory of Consumption Values," *Journal of Business Research* 22(2), 159–170.
- Shu, X., and M. M. Marini (1998). "Gender-Related Change in Occupational Aspirations," *Sociology of Education* 71(1), 43–67.
- Smith-Hunter, A. E., and R. L. Boyd (2004). "Applying Theories of Entrepreneurship to a Comparative Analysis of White and Minority Women Business Owners," *Women In Management Review* 19(1), 18–28.
- Spence, J. T., and E. D. Hahn (1997). "The Attitudes toward Women Scale and Attitude Change in College Students," *Psychology of Women Quarterly* 21(1), 17–34.
- Steenkamp, J. B. E. M., and F. T. Hofstede (2002). "International Market Segmentation: Issues and Perspectives," *International Journal of Research in Marketing*, 19(3), 185–213.
- Steensma, H. K., and M. A. Lyles (2000). "Explaining IJV Survival in a Transitional Economy through Social Exchange and Knowledge-Based Perspectives," *Strategic Management Journal* 21(8), 831–851.
- Stewart, W. H., Jr., R. C. May, and A. Kalia (2008). "Environmental Perceptions and Scanning in the United States and India: Convergence in Entrepreneurial Information Seeking?," *Entrepreneurship Theory and Practice* 32(1), 83–106.
- Stremersch, S., and G. J. Tellis (2004). "Understanding and Managing International Growth of New Products," *International Journal of Research in Marketing* 21(4), 421–438.
- Swann, W. B., Jr., and B. William (1987). "Identity Negotiation: Where Two Roads Meet," *Journal of Personality and Social Psychology* 53(6), 1038–1051.
- Tan, J. (2002). "Culture, Nation, and Entrepreneurial Strategic Orientations: Implications for an Emerging Economy," *Entrepreneurship Theory and Practice* 26(4), 95–111.
- Thornton, A., and D. Freedman (1979). "Changes in the Sex-Role Attitudes of Women 1962–1977: Evidence from a Panel Study," *American Sociological Review* 44(5), 832–842.
- Thornton, A., D. F. Alwin, and D. Camburn (1983). "Causes and Consequences of Sex-Role Attitudes and Attitude Change," *American Sociological Review* 48(2), 211–227.
- Turner, B. S. (2003). "McDonaldization: Linearity and Liquidity in Consumer Cultures," *American Behavioral Scientist* 47(2), 137–153.
- Van Ittersum, K., and N. Wong (2010). "The Lexus or the Olive Tree? Trading Off Between Global Convergence and Local Divergence," *International Journal of Research in Marketing* 27(2), 107–118.
- Van Maanen, J., and E. H. Schein (1979). "Toward a Theory of Organizational Socialization," *Research in Organizational Behavior* 1, 209–264.
- Varman, R., and R. W. Belk (2009). "Nationalism and Ideology in an Anticonsumption Movement," *Journal of Consumer Research* 36(4), 686–700.
- Wang, J. (2008). *Brand New China*. Cambridge, MA: Harvard University Press.
- Wang, Z. J., M. Zhu, and A. Terry (2008). "The Development of Franchising in China," *Journal of Marketing Channels* 15(2–3), 167–184.
- Watson, J. (1997). "Transnationalism, Localization, and Fast Foods in Asia," in *Golden Arches East: McDonald's in East Asia*. Ed. J. L. Watson. Stanford, CA: Stanford University Press, 1–38.
- Wells, R. (2008). "The Effect of Education on Democratisation: A Review of Past Literature and Suggestions for a Globalised Context," *Globalisation Societies and Education* 6(2), 105–117.
- Welsh, D., I. Alon, and C. M. Falbe (2006). "An Examination of International Retail Franchising in Emerging Markets," *Journal of Small Business Management* 44(1), 130–149.

- Yan, Y. Z. (1997). "McDonald's in Beijing: The Localization of Americana," in *Golden Arches East: McDonald's in East Asia*. Ed. J. L. Watson. Stanford, CA: Stanford University Press, 39–76.
- Yiu, D. W., and C. M. Lau (2008). "Corporate Entrepreneurship as Resource Capital Configuration in Emerging Market Firms," *Entrepreneurship Theory and Practice* 32(1), 37–57.
- Zhao, Y., Y. Li, S. H. Lee, and L. B. Chen (2011). "Entrepreneurial Orientation, Organizational Learning, and Performance: Evidence from China," *Entrepreneurship Theory and Practice* 35(2), 293–317.

Appendix

Measures Employed and Sources of Scales

Egalitarianism in China^a

Scale Source: Based on the Ideas of King and King (1997). Adapted to a Franchising Context

- When we step into a franchised fast-food restaurant, we don't care about the social class of the franchisee running the restaurant.
- When we step into a franchised fast-food restaurant, we don't care about the gender of the franchisee running the restaurant.
- When we step into a franchised fast-food restaurant, we don't care about the religion of the franchisee running the restaurant.

Egalitarianism in India^b

Scale Source: Based on the Ideas of King and King (1997). Adapted to a Franchising Context

- When we step into a franchised fast-food restaurant, we don't care about the caste of the franchisee running the restaurant.
- When we step into a franchised fast-food restaurant, we don't care about the gender of the franchisee running the restaurant.
- When we step into a franchised fast-food restaurant, we don't care about the religion of the franchisee running the restaurant.

Democratization

Scale Source: Based on the Ideas of Spence and Hahn (1997). Adapted to a Franchising Context

- At franchised fast-food restaurants, everyone is treated the same.
- Nobody receives special treatment at a franchised fast-food restaurant.
- All consumers at franchised fast-food restaurants have to wait in the same line.
- Even if you are rich or powerful, you will not get special rights at a franchised fast-food restaurant.
- No matter who you are, you have no preferential seating privileges at a franchised fast-food restaurant.

^{a,b}Egalitarianism scales are identical except that in item 2, the word "caste" has been substituted in the India scale for the "social class" item in China scale to lend it more "emic" meaning.

The Differential Effect of Development Speed and Launching Speed on New Product Performance: An Analysis in SMEs

by Maria Moreno-Moya and Jose-Luis Munuera-Aleman

In the last decade, two new components have emerged in the innovation literature: the importance of performance indicators and the time perspective. It is assumed that innovation speed is vital in today's competitive, uncertain, and turbulent market environment. Our study offers a review of the different ways in which innovation speed has been conceptualized and measured. Based on the analysis of 159 small and medium-sized enterprises, this study indicates that there is a need to differentiate between development speed and launching speed. The results show the key role of entrepreneurial orientation and innovation speed for SMEs.

Introduction

In a global competitive environment, firms are faced with exponential developments in technology (Srinivasan 2008) and shifts in customer demand (Rindfleisch and Moorman 2001). Because these factors lead to a reduction in product life cycles (Langerak, Hultink, and Griffin 2008), companies not only have to develop new products, but they also have to do so as quickly as possible (Kessler and Chakrabarti 1996). As a result, one of the success factors of innovation generally perceived as being among the most critical is innovation speed (Carbonell and Rodríguez 2006). However, in existing empirical studies, there are numerous discrepancies regarding the effects this variable has on innovative performance (Langerak and Hultink 2006). A number of studies show positive results (e.g., Lynn, Skov, and Abel 1999; Kessler and Bierly 2002; Chen,

Reilly, and Lynn 2005), whereas others show mixed results (e.g., Ittner and Larcker 1997) or no evidence at all of any relationship between development speed and new product profitability (e.g., Griffin 1997). One of the major sources of inconsistency is the use of different terms and ways to measure speed in new product development (Kessler and Chakrabarti 1996). Taking this into account, we divide the concept of speed into two components, which can be defined and measured separately. In doing so, we move beyond earlier research by looking at the differences between development speed and launching speed in terms of performance, by differentiating the speed with which an idea is converted into a new product and the speed with which that product is then commercialized. We use entrepreneurial orientation (EO) as a key antecedent of innovation speed, based on authors like Atuahene-Gima and Ko (2001), who argue that entrepreneurial firms are

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positioned to be first to market thanks to their exploratory, risk-seeking approach to product innovation. Also, according to Miller (1983), an EO emphasizes aggressive product market innovation, risky projects, and a proclivity to pioneer innovations that pre-empt the competition, whereas Covin and Slevin (1989) argue that EO is distinguished by three characteristics: a high degree of innovativeness, a risk-taking approach, and a proactive attitude. All these definitions imply that entrepreneurial firms try to market their new products ahead of the competition, which is directly linked to the speed with which they develop and launch their products. As such, EO is arguably a key driver in the innovation speed of a firm.

This study focuses on small and medium-sized enterprises (SMEs), for several reasons:

- (1) The above-mentioned importance of being able to adapt to shifting landscapes through entrepreneurship and successful product innovation is of major concern, especially for SMEs, which face greater difficulties when it comes to converting research and development into effective innovation (O'Regan, Ghobadian, and Sims 2006; Parida, Westerberg, and Frishammar 2012). In this regard, SMEs usually lack the resources, capabilities, and market power that traditional multinational enterprises have at their disposal (Knight 2001), which in turn means it is harder for them to obtain returns through innovation speed.
- (2) However, existing literature indicates that SMEs are more nimble, which means they can move quickly and obtain monopoly rents for a longer period of time. Furthermore, SMEs can develop and introduce new products that are tailored to attractive niches in a timely manner (Sok and O'Cass 2011), and they play an important role in promoting flexibility and innovation (Gray 2006).
- (3) SMEs offer a key contribution to innovation and growth in the global economy (Çakar and Ertürk 2010) while at the same time facing unique challenges in terms of new product development. In addition, they are increasingly faced with shorter product life cycles and a need to provide a constant stream of new products to remain competitive, which in turn means that speed is critically important in their

strategy and operations (Alloca and Kessler 2006).

- (4) Despite the widely acknowledged importance of EO, especially in small business research, to date, the number of empirical studies examining the role of EO in innovation in SMEs is limited (Avlonitis and Salavou 2007).

The remainder of this study is organized as follows. First, relevant literature is reviewed, and hypotheses are developed. Next, the methodology used to design the empirical study is described, after which the results are presented. The study closes with a discussion of the main findings and limitations, and suggestions for future research.

Literature Review

Innovation Speed

Many studies, which include two interesting meta-analyses, have tried to identify the drivers of faster product development. Gerwin and Barrowman (2002), in their meta-analysis of the way integrated New Product Development (NPD) practices affect development time, have found that the extent of overlap and interaction between NPD activities, the use of technological tools and formal methods, and the team leader's organizational influence all have a significant impact on development time. More recently, Chen, Damanpour, and Reilly (2010), in a study that included a larger number of antecedents, have found that clear project goals, process concurrency, number and frequency of design iterations, effective leadership, team experience and dedication, and internal integration have the greatest effect on speed. However, as they noted, whereas most studies on innovation speed focus on its antecedents, they do not provide evidence that allows firms to generalize when it comes to speeding up the process of new product development. In fact, existing NPD literature has produced inconsistent results and has so far failed to identify the universal determinants of NPD (Adams-Bigelow and Griffin 2005; Griffin 2002; Kessler and Chakrabarti 1996). For example, whereas some studies indicate that process formalization and process concurrency are important determinants of fast NPD (Bstieler 2005; Tatikonda and Montoya-Weiss 2001), others report nonsignificant effects (Barczak, Hultink, and Sultan 2008; Harter, Krishnan, and Slaughter 2000; Keller 2006).

Additionally, empirical results involving the effects of customer and supplier involvement on cycle time are inconsistent.

Another strand of research focuses on the implications of development speed in terms of firm performance. Though some studies suggest speed is a key ingredient in creating successful new products, the empirical evidence is mixed at best (Griffin 2002). There are three meta-analyses of new product performance antecedents that include speed as an antecedent (Henard and Szymanski 2001; Montoya-Weiss and Calantone 1994; Pattikawa, Verwaal, and Commandeur 2006), all three of which suggest there is a small to moderately positive link between speed and performance. More recently, the meta-analysis carried out by Cankurtaran, Langerak, and Griffin (2013) indicates that there is a relationship between speed and performance. They investigate how speed relates to the different dimensions of new product success, including development costs, product quality, market share, and profitability. Their main finding is that development speed is associated with increased new product success, regardless of whether success is measured in general terms, as an operational outcome or as an external outcome. Furthermore, the results of the heterogeneity analyses indicate there is a more complex relationship than is suggested by the results involving the main effects alone. The moderator analyses provide detailed insight into how the research design features, the way speed is measured, and the context of the study affect the findings. From an academic perspective, their results show that methodological differences are very important in understanding the potential speed–success relationships in NPD. On the other hand, as far as managers are concerned, the results suggest that there may be some divisions or product categories where a reduced NPD cycle time will increase success, whereas there may be others where that is not the case. Moreover, the predictions provided by existing literature with respect to the benefits of innovation speed have been inconsistent and conflicting. Some studies suggest that there is a positive relationship between innovation speed and new product performance (Kessler and Bierly 2002; Lynn, Skov, and Abel 1999), whereas others call the very existence of such a relationship into question (Meyer and Utterback 1995). It is safe to say that, at this point, the nature of the relationship between innovation speed and new product success is

far from clear (Davis, Dibrell, and Janz 2002; Griffin 2002).

A possible explanation for this state of affairs is the use of different terms, including time-to-market (e.g., Chen, Reilly, and Lynn 2005), cycle time (e.g., Ittner and Larcker 1997), innovation speed (e.g., Kessler and Chakrabarti 1996), and speed-to-market (e.g., Meyer and Utterback 1995), to describe the speed with which an idea moves from conception to market introduction, and indicate a firm's ability to move quickly through the new product development process (Chen, Reilly, and Lynn 2005). Hence, there appears to be a lack of conceptual integration caused by the numerous discrepancies in the terminology that is used and the subsequent measurement of variables. The aim of this study is to create clarity in the existing confusion.

As Table 1 shows, although authors like Fang (2008), Menon, Chowdhury, and Lukas (2002), and Stanko, Molina-Castillo, and Munuera-Aleman (2012) all use the term “speed-to-market,” they use different definitions. At the same time, the terms “innovation speed” and “speed-to-market,” which are used by Carbonell and Rodríguez (2009), and Chen, Reilly, and Lynn (2005), respectively, have the same meaning, as do “development cycle time” and “development time.” In short, the problem appears to be that, when talking about innovation speed, some authors refer to all phases of the new product development process, whereas others focus exclusively on the predevelopment and development phase, and do not include the launching phase. Thus, there are studies where, for example, speed-to-market refers to the entire process, whereas other studies refer to the development phase, leaving out the market introduction phase. These inconsistencies create confusion and demonstrate the need for greater clarity. We propose using the terms “development speed” and “launching speed,” based on the assumption that it is necessary to establish a clear difference between the development and market introduction of a new product or service (see Figure 1). This distinction also makes sense when it comes to measuring a company's ability to accelerate the process. Though development speed may depend to a greater extent on the internal resources of the company, the decision as to when to launch a new product (launching speed) also depends on external factors, such as competitors or consumers.

Table 1
Definitions and Measures of Innovation Speed

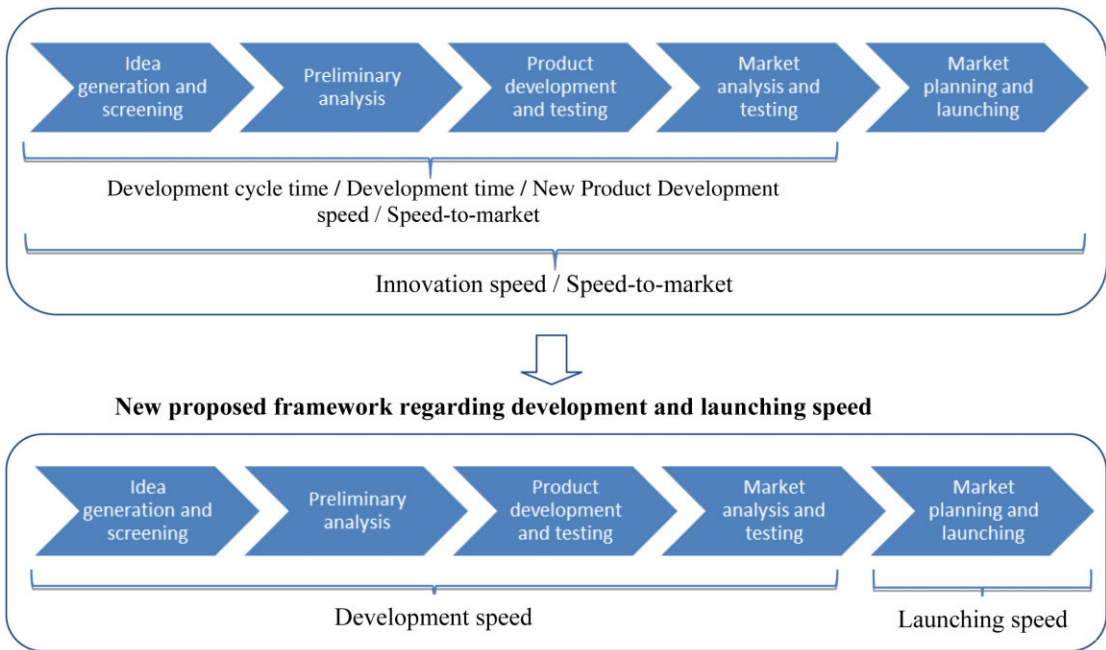
Carbonell and Rodríguez (2009)	<i>Innovation speed</i> describes the pace at which product development activities occur between idea conception and market launch (Kessler and Bierly 2002)
Chen, Reilly, and Lynn (2005)	<i>Speed-to-market</i> describes how quickly an idea moves from conception to its initial commercialization or introduction into the marketplace
Fang (2008)	<i>Speed-to-market</i> reflects the time elapsed between the initial development, which includes conception and definition, and the ultimate introduction of an innovation into the marketplace (Griffin 1997)
Griffin (2002); Langerak, Hultink, and Griffin (2008)	<i>Development cycle time</i> is defined as the time that elapses between the idea's generation and the moment the new product is ready for market introduction
Langerak and Hultink (2006); Langerak, Griffin, and Hultink (2010)	<i>Development time</i> is defined as the time that elapses between the idea's generation, when the firm decides to develop a new product, and the moment the product is ready for market introduction
Menon et al. (2002); Menon and Lukas (2004)	<i>New product development speed</i> is defined as the pace of activities between idea conception and product implementation
Menon, Chowdhury, and Lukas (2002); Stanko, Molina-Castillo, and Munuera-Aleman (2012)	<i>Speed-to-market</i> is defined as the pace of activities between idea conception and product implementation

Regardless of the terminological confusion previously outlined, innovation speed has become increasingly important to the survival and growth of organizations competing in industries that are characterized by shorter product life cycles. Clearly, some of the major factors that influence a company's decision to adopt a speedy new product development as a critical element of its strategic business plan are external in nature, for example, intensely competitive markets, rapidly changing consumer tastes, accelerating technological advancements, a lack of patent protection and product life cycle maturity (Menon et al. 2002). Organizations that do not respond quickly and adequately to such factors run the risk of being outperformed by their competitors. Finally, new product development speed is critical because product life cycles are shortening and products become obsolete more quickly than before, while competition has also intensified (Filippini, Salmaso, and Tassarolo 2004). It is assumed that reducing development cycle times leads to faster market feedback, lower

costs, and greater business success. Product development speed distinguishes a firm from its competition through faster learning and greater proliferation of its products in the marketplace (Wheelwright and Clark 1992).

However, in spite of the growing number of academic studies devoted to innovation speed, what is lacking is research into innovation speed as a function of company size. At the same time, this aspect is of some importance because SMEs display certain characteristics that could have special significance for innovation speed, such as a different predisposition to strategic planning (Gibson and Casser 2005), a less formal (Schwenk and Shrader 1993) or more flexible approach, and a less bureaucratic structure (Gagnon, Sicotte, and Posada 2000). In fact, Alloca and Kessler (2006) shed light on the unique attributes possessed by SMEs compared with large firms, confirming the positive outcomes of speed. They also highlight the importance of adopting a contingency approach to new product development speed in relation to firm size.

Figure 1
Discrepancies in the Use of Terms Regarding Innovation Speed



EO

The phenomenon of an EO as a driving force behind the organizational pursuit of entrepreneurial activities has become a central focus of entrepreneurship literature and has been the subject of more than 30 years of research. A number of terms have been used to refer to this phenomenon, including EO, intensity, style, posture, proclivity, and a propensity for corporate entrepreneurship (e.g., Zahra, Jennings, and Kuratko 1999). As a result, it is perhaps not surprising that researchers have yet to agree on a general definition (see Covin and Wales 2012 for an extensive revision).

The expectation is that, as the entrepreneurship paradigm expands, organizations as such behave in an entrepreneurial way (Jennings and Lumpkin 1989), which is reflected in EO (Lumpkin and Dess 1996), a salient strategy-making and decision-making process (Dess, Lumpkin, and Covin 1997; Lyon, Lumpkin, and Dess 2000). EO constitutes an organizational phenomenon that reflects a firm's ability to develop proactive and aggressive initiatives to gain a competitive advantage (Atuahene-Gima and Ko 2001). Previous research suggests that

EO drives innovative activity (Covin and Slevin 1991; Russell and Russell 1992). Moreover, innovative firms have a more willing attitude toward risk taking and proactive market leadership (Khan and Manopichetwattana 1989). Likewise, being reactive is not sufficient to compete successfully in a dynamic world of aggressive innovators, and most innovative firms are more willing to examine and confront risky opportunities (Shrivastava and Souder 1987). However, few studies have explored the influence of EO on product innovation empirically. Though existing literature suggests that EO promotes innovative activities by affecting the introduction and implementation of product innovation within firms, there is no explicit empirical evidence involving its influence on new product performance. Consequently, it is interesting to see whether an enhanced EO influences both the level of speed and the results of product innovation, especially in the case of SMEs. Thus far, empirical research has not looked at factors like age, size, etc., but has instead focused primarily on the phenomenon of EO itself (Covin and Wales 2012). However, though large firms typically

have the resources needed to engage in entrepreneurial activities to develop new products, it is not clear to what extent that applies to SMEs as well and whether these entrepreneurial activities influence their performance. Table 2 shows the major studies of EO in the SMEs context.

Hypotheses

EO and New Product Performance

Although EO has been found to lead to improved performance (Wiklund and Shepherd 2005; Zahra and Covin 1995), existing empirical evidence is inconsistent. Lee, Lee, and Pennings (2001) found only weak evidence to suggest that there is a positive relationship between EO and a start-up's performance, whereas Slater and Narver (2000) detected no connection at all to business profitability. Wiklund and Shepherd (2005) suggest that an EO enhances the relationship between a firm's knowledge-based resources and its performance, whereas Naman and Slevin (1993) emphasize the fit with organizational structure and strategy, and Lumpkin and Dess (1996) suggest that the relationship with performance is context specific.

In this paper, we expect to find a positive relationship between EO and the performance of new product in SMEs. Indeed, a firm with an EO would be expected to develop a set of skills that shape its ability to improve its business performance further (Kraus, Rigtering, Hughes, and Hosman 2012). SMEs may develop an entrepreneurial mindset to recognize the threats and opportunities in their environment in order to ensure their survival (Krueger 2000) and develop new products in response to those opportunities. We propose a hypothetical relationship between EO and new product market performance. This dependent variable refers to the profit, return on investment, and market share objectives.

H1: EO has a positive impact on new product performance.

EO and innovation speed. According to Alvarez and Barney (2007), the key to entrepreneurial success is the ability to spot new opportunities and take advantage of them as they occur. In fact, EO drives exploration within the firm and allows for the reconfiguration of resources and knowledge into better product market solutions that respond to anticipated

changes (Atuahene-Gima and Ko 2001; Hughes and Morgan 2007; Hughes, Hughes, and Morgan 2007). Existing research also suggests that EO is an effective tool for coping with competitive threats and avoiding competitive pressure (Lumpkin and Dess 1996). In other words, having an EO allows firms to recognize and exploit institutional environmental opportunities, thereby providing more effective and efficient means and ends in the marketplace (Webb et al. 2011). Moreover, Atuahene-Gima and Ko (2001) state that entrepreneurial firms are in a position to be first to market thanks to their exploratory, risk-seeking approach to product innovation. In addition, entrepreneurial firms enter the market more quickly than other firms. These aspects could prove especially beneficial in an environment that is characterized by rapid change and shortened product model life cycles, where future profits from existing operations are uncertain and businesses need to look for new opportunities all the time (Rauch et al. 2009). Accordingly, we would argue that having an EO may help firms bring their products to market more quickly. In fact, SMEs with a high level of EO have been found to respond to competition aggressively and proactively (Lumpkin and Dess 2001), with the aim of creating a relatively favorable market niche for themselves (Dess, Lumpkin, and McGee 1999). Hence, we expect entrepreneurial SMEs to develop and market new products more quickly than nonentrepreneurial firms, given their overriding focus on risk seeking and experimentation in product innovation.

H2a: EO has a positive impact on development speed.

H2b: EO has a positive impact on launching speed.

The Dimensions of Innovation Speed and New Product Performance

Research suggests that innovation speed has a substantial, positive impact on a new product's market share and profitability (Carbonell and Rodríguez 2006). However, existing literature has produced inconsistent and conflicting predictions. A number of studies suggest that innovation speed is associated with competitive advantage and superior success rates (Chen, Reilly, and Lynn 2005; Kessler and Bierly 2002). However, other studies found no evidence at all of any relationship between development

Table 2
Major Studies on EO in SMEs

Authors	Primary Focus	Sample/Data	Analysis	Summary of Comments and Findings
Avlonitis and Salavou (2007)	Identify EO profile of SMEs to suggest variations in product innovativeness dimensions of different performance potential	194 manufacturing companies	Cluster analysis of variance	They found two opposite groups of SMEs according to the EO construct (active and passive). Also, they found that these groups differ significantly in one dimension of product innovativeness: new product uniqueness.
Keh, Nguyen, and Ng (2007)	Effects of EO on the performance on SMEs	294 Singaporean entrepreneurs	AMOS 4.0	The results indicate that EO plays an influential role on the acquisition and utilization of marketing information, and also has a direct effect on firm performance.
Knight (2000)	Interrelationships of EO, market strategy, tactics, and firm performance among SMEs affected by globalization	268 manufacturers in different industries	T-test correlation analysis	EO stressing product/process innovativeness and a generally proactive approach to the external environment is associated with the development of quality leadership, in which firms emphasize product and product-service quality.
Knight (2001)	Role of international EO, key strategic activities, and the collective effect of these constructs on the international performance of international SME	268 manufacturers	Lisrel 8	International EO is an important driver of several important parameters, key to the international performance of the firm.
Moreno and Casillas (2008)	EO growth relationship	434 SMEs	Partial least squares (PLS)	EO affects growth through the strategic behavior. These relationships are moderated by the external context.
Runyan, Droge, and Swinney (2008)	It examines the constructs of EO versus small business orientation (SBO), their impact on small business performance, and whether these effects are moderated by longevity	267 small business owners	Lisrel 8.72	EO and SBO are unique constructs. A two-group model split on "below 11 years" versus "11+ years" demonstrated that the structural paths connecting EO and SBO to performance are not the same in these groups: For the younger group, only EO significantly predicts performance, whereas for the older group, only SBO significantly predicts performance.

Table 2
Continued

Authors	Primary Focus	Sample/Data	Analysis	Summary of Comments and Findings
Salavou and Lioukas (2003)	It investigates whether market focus, technological posture, and EO lead to the adoption of more radical product innovations	Greek SMEs	Logistic regression model	It is mainly EO that favors the choice of radical product innovations.
Swierczek and Ha (2003)	Relationship between EO and firm performance	172 Thai SMEs and 306 Vietnamese SMEs		Thai SMEs are more innovative and proactive than their counterparts, whereas Vietnamese SMEs are inclined to take more risks.
Wiklund and Shepherd (2003)	How internal characteristics to the firm moderate and mediate the EO-performance relationship	384 Swedish SMEs	Hierarchical linear regression analysis	Knowledge-based resources (applicable to discovery and exploitation of opportunities) are positively related to firm performance, and EO enhances this relationship.
Wiklund and Shepherd (2005)	It investigates the EO of small businesses	413 Swedish firms	Hierarchical linear regression analysis	Access to capital and the dynamism of the environment are important to small businesses. Also, they find that when combined with EO, the configurational approach explains variance in performance over and above a contingency model and a main-effects-only model

speed and new product profitability (Griffin 2002; Meyer and Utterback 1995), or between speed-to-market and organizational performance (Kessler and Chakrabarti 1996). In fact, there are studies that suggest that accelerated product development may have hidden disadvantages, such as higher costs and more mistakes (Griffin 2002), whereas in some cases, no relationship between success and development time could be identified (Ittner and Larcker 1997). These inconsistencies may result from a lack of theoretical integration with regard to innovation speed. In this study, we argue that one way to resolve these contradictions is to draw a clear distinction between product development speed and commercialization speed.

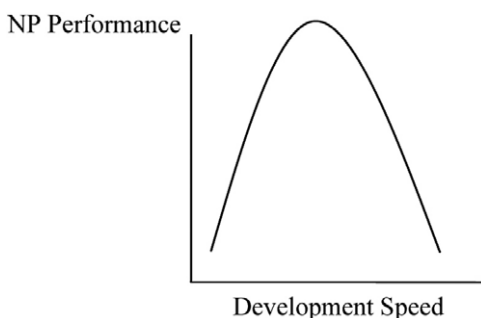
H3: There is a differential effect of development speed and launching speed on new product performance.

A literature review reveals the advantages and disadvantages of increasing development speed (see Table 3). Credible arguments can be made in favor of and against both perspectives. To reconcile the two perspectives, we propose an inverted U-shaped relationship between development speed and new product performance, which means that, for each new product that is developed under specific competitive conditions, there is an optimal development speed that maximizes new product profitability (see Figure 2). To the left of the optimal point, increasing development speed improves new

Table 3
Advantages and Disadvantages of Development Speed

Advantages	Disadvantages
Consumer-related advantages with regard to the first choice of profitable segments and positions (Niedrich and Swain 2004).	Higher costs due to Crawford's (1992) hidden costs of accelerated NPD, such as the risk of trivial innovation driving out more profitable breakthrough innovations
Occurrence of positive network effects	Higher costs as a result of the required investments in technology (Golder and Tellis 1993)
High switching costs for early adopters (Kardes and Kalyanaram 1992)	Elevated costs due to more thorough concept and prototype testing (Lee et al. 2000)
Cost reductions through economies of scale and experience effects (Rosenau 1990)	Inability to exploit opportunities arising from shifts in consumer preferences and purchase criteria as the market develops (Zhang and Markham 1998)
Pricing freedom (Smith and Reinertsen 1991)	Being locked in on first-generation technology, which prevents firms from taking advantage of the latest technology (Golder and Tellis 1993)
Distribution advantages with regard to the choice of the best distributors	Possible positioning and pricing mistakes inherent with accelerated NPD (Lee et al. 2000)
Technological standard setting (Golder and Tellis 1993)	
Supply-based advantages related to pre-empting scarce resources and suppliers (Lee et al. 2000)	

Figure 2
Inverted U-Shaped Relationship Between Development Speed and New Product Performance



product performance, whereas to the right of the optimal point, speed becomes counterproductive, which is supported by arguments related to the hidden costs of accelerated NPD, growing

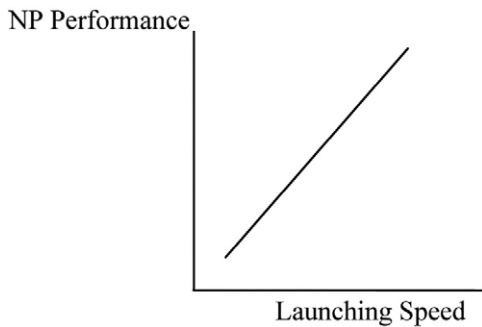
market uncertainties, and greater technological risks (Crawford 1992).

H3a: The relationship between development speed and new product performance is an inverted curvilinear U-shaped function.

Time-based strategies, such as first-mover or fast-follower strategies, have become the latest key to competitive advantage in the current market environment (Chen, Reilly, and Lynn 2005). In fact, one of the strategic launch decisions examined most frequently is when to enter the market. Several studies discuss the concept of first-mover advantage and examine how pioneering new markets can result in a superior competitive position (Rodríguez, Carbonell, and Rodríguez 2011). Karagozoglu and Brown (1993) noted that an earlier product introduction improves profitability by extending a product's sales life and creating an opportunity to charge a premium price.

Effective new product commercialization is, thus, a challenging task, and several studies

Figure 3
Relationship Between Launching Speed and New Product Performance



indicate that the launch strategy is a key determinant of a new product's success or failure (Hultink et al. 1997). Consequently, we argue that introducing a new product more quickly once it has been developed increases the pioneer benefits.

H3b: Launching speed has a linear positive impact on new product performance.

As shown in Figures 2 and 3, we propose that an increase in development speed may benefit new product performance up to a certain point, after which the impact may be negative. However, when it comes to launching speed, any increase may benefit new product performance.

Methodology

Data Collection and Sample

To collect data and identify respondents, we used publicly available directories, such as the SABI database of firms with 10–250 employees and an annual turnover of less than €40 million, which is in line with the widely accepted guidelines stipulated by the EU.

To begin with, our questionnaire was pre-tested among several managers and academics. The data were collected through personal interviews with 159 managers of manufacturing companies, as part of the Economic Barometer Project funded by the Instituto de Fomento de la Región de Murcia (Spain). Sample selection was designed to represent the structure of the

region, following the stratified sampling principles in finite populations. The population was segmented according to industry and geographic location. The number of firms in each stratum was calculated relative to information from the Central Directory of Firms of the National Statistical Institute. Companies that declined to participate in the project were replaced with similar (randomly selected) companies in the same industry and geographic area. The estimation precision of the sample leads, in the worst case (relative frequency of answers in a specific item is $p = .5$), to a maximum error of three percent, at a confidence level of 95 percent. The distribution of firms according to industry is shown in Table 3. On average, the firms employed 57 employees and had annual revenues of €10 million. As shown in Table 4, which contains the sample characteristics, 20.1 percent of the sample falls into the category of wood and furniture. Other sectors that are represented are services (15.1 percent), machinery and transportation equipment (14.5 percent), food (11.3 percent), construction (9.4 percent), chemical (8.9 percent), and electrical and electronic equipment (8.8 percent). With regard to the number of employees, 82.1 percent of the sample have 50 or fewer employees, which means they are small firms according to EU guidelines. In addition, they can also be classified as small businesses from the point of view of sales, with 8 percent of the sample in the sales that ranges of up to €10 million. We analyzed sample representativeness and checked for nonresponse bias (Armstrong and Overton 1977) and single informant bias (Podsakoff et al. 2003). To test for nonresponse bias, we compared early to late respondents (Armstrong and Overton 1977). The remaining 33 percent were considered representative of firms that ultimately did not respond to the survey. The means of the constructs were compared, and no significant differences were found. Subsequent t-tests revealed no significant differences between the groups regarding various aspects of the company and of the NPD process, for example, company size, number of ongoing projects, development time (in months), and number of members in the project team. Accordingly, we concluded that nonresponse bias was not a significant problem.

Measuring Issues and Pretesting

Our multi-item scales were predominantly drawn from earlier studies. The constructs were

Table 4
Sample Characteristics

SIC Code	%	Number of Employees	%	Sales in € (×10 ⁶)	%
15: Construction	9.4				
20: Food	11.3	10–15	19.2	<1	19.7
28: Chemical	8.9	15–20	27.6	1–2	18.3
24, 25: Wood and Furniture	20.1	21–50	35.3	2.1–3	12.0
35, 37: Machinery and Transportation Equipment	14.5	51–100	6.4	3.1–5	15.0
36: Electrical and Electronic Equipment	8.8	101–150	3.8	5.1–10	14.8
58: Services	15.1	151–200	3.3	10.1–30	12.0
Others	11.9	201–250	4.4	30.1–40	8.2
Average		57		€10 million	

measured using five-point multi-item scales (see the Appendix). Before collecting the data, we pretested the questionnaire among manager executives and academics to improve the clarity of the questionnaire and ensure an effective, accurate, and unambiguous communication with the respondents. EO was measured with four items, based on the study by Naman and Slevin (1993). Development speed and launching speed were operationalized through three items (1) time effectiveness (e.g., launching the product on or ahead of schedule), (2) time efficiency (carrying out the project faster than it could have been carried out), and (3) time relative to what was considered customary for the industry. Although these items were taken from previous studies (Carbonell and Rodríguez 2009; Chen, Reilly, and Lynn 2005; Lynn, Skov, and Abel 1999), we differentiated between development time and launching time. To obtain an accurate measure of new product performance, we drew on the work by Tatikonda and Montoya-Weiss (2001), using three items. Two control variables were included to reduce the possibility of alternative explanations: firm size and barriers to innovation. Firm size is a frequently used control variable, especially in SME studies in the context of innovation (e.g., Lasagni 2012; Madrid-Guijarro, Garcia, and Van Auken 2013; Yang, Zimmerman, and Jiang 2011). Larger firms have better access to resources (Barney 1991), especially human capital and the knowledge and skills involved (Zimmerman 2008), which increase their ability to innovate. Consequently, larger firms have been found to be

more successful in developing and marketing new products. Also, it is well known that small firms are particularly restricted by innovation barriers because of their more limited resource base (e.g., Hewitt-Dundas 2006; Hadjimanolis 1999) which has an impact on their innovative result (Madrid-Guijarro, Garcia, and Van Auken 2009). Consequently, we controlled for these factors.

The unidimensionality and reliability of the data set were assessed using different procedures. First of all, an initial exploration of unidimensionality was carried out using principal component factor analyses. In each analysis, the eigenvalues were greater than one, lending preliminary support to a claim of unidimensionality in the constructs. Next, we performed confirmatory factor analysis (CFA), using EQS6.1 and alpha reliability analysis, to establish the required convergent validity, discriminant validity, and reliability. Because our study contains several multi-item reflective scales, we investigated the psychometric properties of these measures with the composite reliability index (Bagozzi and Yi 1988) and the average variance extracted index (Fornell and Larcker 1981), both of which exceeded the recommended benchmarks of 0.60 and 0.50, respectively, with the exception of EO's Average Variance Extracted (AVE), which is 0.49. Table 5 presents the reliability measures and CFA results for the data set. In all, the respondents displayed a high level of EO (with an average of above 2.5). The same can be said with regard to development speed and launching speed. Our sample shows both a high

Table 5
Reliability, Validity, and Measurement Model

	Mean	S.D.	Cronbach's Alpha	SCR	AVE
EO	3.51	0.68	0.71	0.70	0.49
Development Speed	3.06	0.68	0.82	0.83	0.62
Launching Speed	3.16	0.72	0.77	0.79	0.57
New Product Performance	3.08	0.88	0.85	0.84	0.64

$\chi^2(48) = 69.66$.

Comparative fit index = 0.97; Bollen fit index = 0.97; non-normed fit index = 0.96; root mean square error of approximation = 0.06. SCR, Scale Composite Reliability; AVE, Average Variance Extracted.

Table 6
Correlations Matrix

	1	2	3	4
(1) EO	1			
(2) Development Speed	0.117**	1		
(3) Launching Speed	0.285**	0.427**	1	
(4) Performance	0.410**	0.287**	0.340**	1

Significance level: ** $p < .01$

development speed and a high launching speed. Also, new product performance is above average, which means that our sample displays high performance levels. The fit indices for the overall model were as follows: chi-squared value ($df = 48$) = 69.66, comparative fit index = 0.97, non-normed fit index = 0.96, Bollen fit index = 0.97, and standardized root mean square error of approximation = 0.06. These values collectively indicate that the measurement model has an acceptable fit. All item-construct loadings are high and significant, providing evidence of adequate convergent validity.

Furthermore, evidence of discriminant validity among the dimensions was provided by two different procedures recommended in existing literature: (1) the 95 percent confidence interval constructed around the correlation estimate between two latent variables never includes value one (Anderson and Gerbing 1988), and (2) the comparison of the square root of the AVE with the correlations among constructs

reveals that the square root of the AVE for each component is greater than the correlation between components, which supports discriminant validity (Fornell and Larcker 1981). Overall, the results from these tests provided strong evidence in favor of reliability and discriminant validity.

Table 6 also shows the zero-order correlations.

Most researchers agree that common method variance is potentially a serious bias in behavioral research, especially in the case of single informant surveys. We used the Harman one-factor test to determine whether common method bias threatened the interpretation of our results. A Harman's single factor test checks whether a majority of the variance can be explained by a single factor. If one factor explains more than 50 percent of the variance, common method bias threatens the results. In our case, the single factor analysis, as recommended by Podsakoff and Organ (1986), was adopted using SPSS 20 (IBM, Armonk, New

York, USA). The analysis produced four factors with eigenvalues greater than 1, accounting for 71 percent of the variance. The first factor accounted for 33 percent (less than 50 percent) of the variance. These results indicate that neither a single factor nor a general factor could account for the majority of the covariance in the measures, providing evidence that common method variance was not a problem in the sample.

Results

Regression analyses were used to test our hypotheses. Specifically, hierarchical regression analysis was used to test H1, H3a, and H3b. The linear variables were entered in the first model, and the quadratic term in the second model. Model 2 was used to test the linear and quadratic hypotheses. Model 2 explained 26 percent of the variance of new product performance ($F = 3.18$). H1 suggests there is a positive relationship between EO and new product performance. Since the coefficient is significant ($\beta = 0.33, p < .01$), this hypothesis is supported. As predicted in H3a, development speed has an inverted U-shaped relationship with innovation speed. Thus, the estimate for the quadratic term of development speed was negative and statistically significant ($\beta = -0.15, p < .01$). Furthermore, adding the development speed squared term in the second model significantly increased the explained variance (R^2 change = 0.030, $p < .05$). Finally, as expected, launching speed has a significant linear impact on performance ($\beta = 0.17, p < .05$), which means that H3b is also supported (Table 7). As we can see in Table 7, firm size and barriers to innovation were used as control variables, and the effect was not significant.

We conducted two additional regression analyses to test H2a and H2b (see Tables 8 and 9). With regard to the effects of EO on the proposed dimensions of innovation speed, H2a hypothesizes that EO is positively related to development speed, which was found to be true ($\beta = 0.12, p < .10$), whereas H2b that EO also has a positive effect on launching speed. The findings also support H1b ($\beta = 0.23, p < .01$). In these two additional regressions, we also included firm size and barriers to innovation as control variables, and the effect was not significant, which means that we can assume that these variables do not affect our results.

Table 7
Hierarchical Regression Analysis
(Standardized Coefficients)

Control Variables	Model 1	Model 2
Firm Size	0.06	0.05
Barriers to Innovation	0.01	0.01
EO	0.31**	0.33**
Development Speed	0.19**	0.20**
Launching Speed	0.16**	0.17**
(Development Speed) ²		-0.15**
R^2	0.21 (2.93)	0.24 (3.18)
ΔR^2	—	0.03*

Significance levels: * $p < .05$; ** $p < .01$.

Dependent variable: new product performance.

Table 8
Regression Analysis
(Standardized Coefficients)

Control Variables	
Firm size	0.01
Barriers to innovation	0.09
EO	0.12**
R^2	0.027

Significance levels: * $p < .05$; ** $p < .01$.

Dependent variable: development speed.

Discussion

Reducing product cycle time has a particular appeal to innovative firms. For over a decade, press and business scholars have argued that speeding up the development process is one of the most practical ways to gain a competitive advantage and that it has a positive impact on new product performance. However, empirical studies have shown mixed results (Langerak and Hultink 2006). Also, there is a need to examine smaller companies, which may be especially interesting because of their flexibility and speedy decision-making process. The findings of this study suggest that a source of inconsistency is the use of different terms and ways to measure innovation speed, which is in

Table 9
Regression Analysis
(Standardized Coefficients)

Control Variables	
Firm Size	0.04
Barriers to Innovation	0.05
EO	0.23**
R^2	0.085

Significance levels: * $p < .05$; ** $p < .01$.
Dependent variable: launching speed.

keeping with Kessler and Chakrabarti's (1996) study. The findings indicate that innovation speed plays a key role in new product development in SMEs, but it also underlines the importance of drawing a distinction between development speed and launching speed. In fact, the results show a differential effect of development and launching speed on new product performance: Whereas the relationship between development speed and performance is curvilinear, the relationship with launching speed is linear. We found that there is an inverted U-shaped relationship between development speed and new product performance. When development speed is low, increasing the development speed has a positive impact on performance. However, when development speed becomes too high, any further increase will diminish new product performance. These findings make it possible to reconcile numerous studies that have identified the positive and negative effects of innovation speed, which is the main theoretical contribution of this study. Future research may look at different ways to measure innovation speed, in particular by approaching development speed and launching speed separately, rather than treating innovation speed as a global phenomenon.

Another interesting finding is the importance of EO to SMEs. In this context, we analyzed the effect of EO on development speed and launching speed while at the same time identifying the effect of EO on new product performance. We found that EO has a positive impact on the two dimensions of innovation speed that we distinguished in this study. These results are in keeping with studies that argue that entrepreneurial firms are the first to

the market thanks to their exploratory, risk-seeking approach to product innovation (e.g., Atuahene-Gima and Ko 2001). The results also support the claim that EO has a positive impact on new product performance in SMEs and thus throw light on the empirical controversy regarding the relationship between EO and product performance.

Managerial Implications

In this paper, we explored the role of innovation speed in new product development among SMEs, drawing a distinction between development speed and launching speed. This is a subject that, apart from its academic significance, is of special interest to managers because firms increasingly rely on innovation speed for their survival. We also investigated the role of EO in the innovations of SMEs. Our study shows the managers of SMEs that it is important to adopt an entrepreneurial attitude in order to improve new product performance.

This study offers a valuable contribution, especially to smaller firms, which are generally considered to have a strong potential when it comes to entrepreneurship and innovation, but which have limited access to resources. These firms need to understand the importance of incorporating both entrepreneurial values and fast product innovation into their business approach. Identifying activities that are critical to improving a firm's ability in terms of introducing new product and reducing time to market will enable the managers of SMEs to use their scarce resources optimally and focus their efforts on factors that create the maximum return on investment. However, although reducing cycle time has a particular appeal to small innovative firms, because they may find that speeding up the development process to hit a window of opportunity has brought them more success than they expected, it is essential for managers to draw a distinction between development speed and launching speed. When it comes to new product development, it is important not to take too long because there is a risk that competitors are developing a similar product more quickly, though there are also risks and problems associated with trying to develop a new product too quickly. On the other hand, with regard to launching speed, the choice of market entry time to improve new product success is contingent upon more external factors. It is only when a product has been developed that a firm can think of entering the

market and exploiting the strategic window. If they wait too long to launch a new product, managers could lose their competitive advantage. For example, competitors may have introduced similar products by that time. This is an area where the marketing and R&D departments also have a role to play. We can expect the R&D department to be more involved and in charge of development speed while the Marketing department is more concerned with launching speed. In short, it is necessary to manage the different interests of these areas because they use different variables in their decision to accelerate or slow down development speed and launching speed.

We also investigated the role of EO in the innovations carried out by SMEs. Our study provides evidence to the managers of SMEs with regard to the importance of adopting an entrepreneurial attitude in connection with new product performance. This means that managers should be aware that adopting an EO profile could not only present a challenge but that it could also be an appropriate opportunity-focused response by firms facing fierce competition from bigger competitors. Adopting an EO potentially allows them to improve the new products developed by their small firms.

Limitations and Future Research Guidelines

Our study is subject to some limitations. First of all, we have used subjective measurements based on the perception of the managers participating in our survey. Despite the extensive use of retrospective perceptual data in strategy research, especially in new product research (Huang, Souter, and Brown 2004; Langerak, Hultink, and Griffin 2008), perceptual data can undoubtedly be subject to bias, and our findings must be interpreted with a degree of caution. Second, the same source was used to gather data for the dependent and the independent variables, which means that the relationships between the variables may be inflated, due to common method variance. Without minimizing the importance of common method bias, the different data analyses that we conducted indicate that there is no such bias to speak of, which, in this study, does not affect the interpretation of the data analysis. However, future research should address the single-source issue. An interesting avenue for future research involves

including data from different sources and, if possible, other objective performance indicators (Hooley et al. 2005; Molina-Castillo and Munuera-Aleman 2009; e.g., stock market value, and revenues). Third, the question is whether our findings are specific to Spanish SMEs or whether they can be applied across a broader spectrum. Although EO is one of the few entrepreneurship constructs that has been applied across several countries, the specific business culture of the sample under study cannot be ruled out completely. In fact, some cultural differences in the perception of the EO scale have been noted (Knight 1997). Further research is needed to determine generalizability. Another interesting avenue for future research involves including moderating dimensions, such as those related to a firm's environment, resources, and product innovativeness. Drawing a further distinction between business-to-consumer and business-to-business context would also be useful. Also, the results may be improved and made more robust by using longitudinal data instead of cross-sectional information. Finally, our results may be enhanced by conducting additional analysis such as structural equation modeling. In doing so, our results may be confirmed and made more robust.

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References

- Adams-Bigelow, M., and A. Griffin (2005). Product Development Cycle Time and Success: New Results from PDMA's Comparative Performance Assessment Study, paper presented at the Product Development and Management Association International Conference, San Diego, CA, October.
- Alloca, M. A., and E. H. Kessler (2006). "Innovation Speed in Small and Medium-Sized Enterprises," *Creativity and Innovation Management* 15, 279-295.
- Alvarez, S. A., and J. B. Barney (2007). "Discovery and Creation: Alternative Theories of Entrepreneurial Action," *Strategic Entrepreneurship Journal* 1(1-2), 11-26.
- Anderson, J. C., and D. W. Gerbing (1988). "Structural Equation Modeling in Practice: A

- Review and Recommended Two-Step Approach," *Psychological Bulletin* 103(3), 411–423.
- Armstrong, J. S., and T. S. Overton (1977). "Estimating No Response Bias in Mail Surveys," *Journal of Marketing Research* 14, 396–402.
- Atuahene-Gima, K., and A. Ko (2001). "An Empirical Investigation of the Effect of Market Orientation and Entrepreneurship Orientation Alignment on Product Innovation," *Organization Science* 12(1), 54–74.
- Avlonitis, G., and H. Salavou (2007). "Entrepreneurial Orientation of SMEs, Product Innovativeness, and Performance," *Journal of Business Research* 60, 566–575.
- Bagozzi, R. P., and Y. Yi (1988). "On the Evaluation of Structural Equation Models," *Journal of the Academy of Marketing Science* 16(1), 74–94.
- Barczak, G., E. J. Hultink, and F. Sultan (2008). "Antecedents and Consequences of Information Technology Usage in NPD: A Comparison of Dutch and US Companies," *Journal of Product Innovation Management* 25, 620–631.
- Barney, J. B. (1991). "Firm Resources and Sustained Competitive Advantage," *Journal of Management* 17(1), 99–120.
- Bstieler, L. (2005). "The moderating Effect of Environmental Uncertainty on New Product Development and Time Efficiency," *Journal of Product Innovation Management* 22(3), 267–284.
- Cankurtaran, P., F. Langerak, and A. Griffin (2013). "Consequences of New Product Development Speed: A Meta-Analysis," *Journal of Product Innovation Management* 30, 465–486.
- Carbonell, P., and A. I. Rodríguez (2006). "The Impact of Market Characteristics and Innovation Speed on Perceptions of Positional Advantage and New Product Performance," *International Journal of Research in Marketing* 23, 1–12.
- (2009). "Relationships Among Team's Organizational Context, Innovation Speed, and Technological Uncertainty: An Empirical Analysis," *Journal of Engineering and Technology Management* 26, 28–45.
- Chen, J., R. R. Reilly, and G. S. Lynn (2005). "The Impacts of Speed-to-Market on New Product Success: The Moderating Effects of Uncertainty," *IEEE Transactions on engineering management* 52(2), 199–211.
- Chen, J., F. Damanpour, and R. R. Reilly (2010). "Understanding Antecedents of New Product Development Speed: A Meta-Analysis," *Journal of Operations Management* 28(1), 17–33.
- Covin, J. G., and D. P. Slevin (1989). "Strategic Management of Small Firms in Hostile and Benign Environments," *Strategic Management Journal* 10, 75–87.
- (1991). "A Conceptual Model of Entrepreneurship as Firm Behavior," *Entrepreneurship Theory and Practice* 16(1), 7–25.
- Covin, J. G., and W. J. Wales (2012). "The Measurement of Entrepreneurial Orientation," *Entrepreneurship Theory and Practice* 36, 677–702.
- Crawford, C. M. (1992). "The Hidden Costs of Accelerated Product Development," *Journal of Product Innovation Management* 9(3), 188–199.
- Çakar, N. D., and A. Ertürk (2010). "Comparing Innovation Capability of Small and Medium-Sized Enterprises: Examining the Effects of Organizational Culture and Empowerment," *Journal of Small Business Management* 48, 325–359.
- Davis, P. S., C. C. Dibrell, and B. D. Janz (2002). "The Impact of Time on the Strategy-Performance Relationship: Implications for Managers," *Industrial Marketing Management* 21(4), 291–304.
- Dess, G., G. T. Lumpkin, and J. McGee (1999). "Linking Corporate Entrepreneurship to Strategy, Structure and Process: Suggested Research Directions," *Entrepreneurship Theory and Practice* 23, 85–102.
- Dess, G. G., G. T. Lumpkin, and J. G. Covin (1997). "Entrepreneurial Strategy Making and Firm Performance: Tests of Contingency and Configurational Models," *Strategic Management Journal* 18, 677–695.
- Fang, E. (2008). "Customer Participation and the Trade-Off Between New Product Innovativeness and Speed to Market," *Journal of Marketing* 72(July), 90–104.
- Filippini, R., L. Salmaso, and P. Tassarolo (2004). "Product Development Time Performance: Investigating the Effect of Interactions between Drivers," *Journal of Product Innovation Management* 21(2), 199–214.
- Fornell, C., and D. F. Larcker (1981). "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," *Journal of Marketing Research* 18(1), 39–50.

- Gagnon, Y.-C., H. Sicotte, and E. Posada (2000). "Impact of SME Manager's Behavior on the Adoption of Technology," *Entrepreneurship Theory & Practice* 25(4), 43–57.
- Gerwin, D., and N. J. Barrowman (2002). "An Evaluation of Research on Integrated Product Development," *Management Science* 48(7), 938–953.
- Gibson, B., and G. Casser (2005). "Longitudinal Analysis of Relationships between Planning and Performance in Small Firms," *Small Business Economics* 25(3), 207–222.
- Golder, P. N., and G. J. Tellis (1993). "Pioneering Advantage: Marketing Logic or Marketing Legend?," *Journal of Marketing Research* 30, 158–170.
- Gray, C. (2006). "Absorptive Capacity, Knowledge Management and Innovation in Entrepreneurial Small Firms," *International Journal of Entrepreneurial Behaviour and Research* 12(6), 345–360.
- Griffin, A. (1997). "PDMA Research on New Product Development Practices: Updating Trends and Benchmarking Best Practices," *Journal of Product Innovation Management* 14(6), 429–458.
- (2002). "Product Development Cycle Time for Business to Business Products," *Industrial Marketing Management* 31(4), 291–304.
- Hadjimanolis, A. (1999). "Barriers to Innovation for SME in a Small Less Developed Country (Cyprus)," *Technovation* 19, 561–570.
- Harter, D. E., M. S. Krishnan, and S. A. Slaughter (2000). "Effects of Process Maturity on Quality, Cycle Time, and Effort in Software Product Development," *Management Science* 46(4), 451–466.
- Henard, D., and D. Szymanski (2001). "Why Some New Products Are More Successful than Others," *Journal of Marketing Research* 38(3), 362–375.
- Hewitt-Dundas, N. (2006). "Resource and Capability Constraints to Innovation in Small and Large Plants," *Small Business Economics* 26, 257–277.
- Hooley, G. I., G. E. Greenley, J. W. Cadogan, and J. Fahy (2005). "The Performance Impact of Marketing Resources," *Journal of Business Research* 58(1), 18–27.
- Huang, X., G. N. Souter, and A. Brown (2004). "Measuring New Product Success: an Empirical Investigation of Australian SMEs," *Industrial Marketing Management* 33(2), 117–124.
- Hughes, M., and R. E. Morgan (2007). "Deconstructing the Relationship Between Entrepreneurial Orientation and Business Performance at the Embryonic Stage of Firm Growth," *Industrial Marketing Management* 36(5), 651–661.
- Hughes, M., P. Hughes, and R. E. Morgan (2007). "Exploitative Learning and Entrepreneurial Orientation Alignment in Emerging Young Firms: Implications for Market and Response Performance," *British Journal of Management* 18(4), 359–375.
- Hultink, E. J., A. Griffin, S. Hart, and H. S. J. Robben (1997). "Industrial New Product Launch Strategies and Product Development Performance," *Journal of Product Innovation Management* 14, 243–257.
- Ittner, C. D., and D. F. Larcker (1997). "Product Development Cycle Time and Organizational Performance," *Journal of Marketing Research* 33, 13–23.
- Jennings, D. F., and J. R. Lumpkin (1989). "Functionally Modeling Corporate Entrepreneurship: An Empirical Integrative Analysis," *Journal of Management* 15(3), 485–502.
- Khan, A., and V. Manopichetwattana (1989). "Innovative and Noninnovative Small Firms: Types and Characteristics," *Management Science* 35, 597–606.
- Karagozoglu, N., and W. B. Brown (1993). "Time-Based Management of the New Product Development Process," *Journal of Product Innovation Management* 10, 204–215.
- Kardes, F. R., and G. Kalyanaram (1992). "Order-of-Entry Effects on Consumer Memory and Judgment: An Information Integration Perspective," *Journal of Marketing Research* 29, 343–357.
- Keh, H. T., T. T. M. Nguyen, and H. P. Ng (2007). "The Effects of Entrepreneurial Orientation and Marketing Information on the Performance of SMEs," *Journal of Business Venturing* 22, 592–611.
- Keller, R. T. (2006). "Transformational Leadership, Initiating Structure, and Substitutes for Leadership: A Longitudinal Study of Research and Development Project Team performance," *Journal of Applied Psychology* 91, 202–210.
- Kessler, E. H., and P. E. Bierly (2002). "Is Faster Really Better? An Empirical Test of the Implication of Innovation Speed," *IEEE Transactions on Engineering Management* 49(1), 2–12.

- Kessler, E. H., and A. K. Chakrabarti (1996). "Innovation Speed: a Conceptual Model of Context, Antecedents, and Outcomes," *The Academy of Management Review* 21(4), 1143–1191.
- Knight, G. A. (1997). "Cross-Cultural Reliability and Validity of a Scale to Measure Firm Entrepreneurial Orientation," *Journal of Business Venturing* 12, 213–225.
- (2000). "Entrepreneurship and Marketing Strategy: The SME Under Globalization," *Journal of International Marketing* 8(2), 12–32.
- (2001). "Entrepreneurship and Strategy in the International SME," *Journal of International Management* 7(1), 155–171.
- Kraus, S., J. P. C. Rigtering, M. Hughes, and V. Hosman (2012). "Entrepreneurial Orientation and the Business Performance of SMEs: A Quantitative Study from the Netherlands," *Review of Managerial Science* 6, 161–182.
- Krueger, N. F. (2000). "The Cognitive Infrastructure of Opportunity Emergence," *Entrepreneurship Theory Practice* 24(3), 5–23.
- Langerak, F., and E. J. Hultink (2006). "The Impact of Product Innovativeness on the Link between Development Speed and New Product Profitability," *Journal of Product Innovation Management* 23, 203–214.
- Langerak, F., E. J. Hultink, and A. Griffin (2008). "Exploring Mediating and Moderating Influences on the Links among Cycle Time, Proficiency in Entry Timing, and New Product Profitability," *Journal of Product Innovation Management* 25(4), 370–385.
- Langerak, F., A. Griffin, and E. J. Hultink (2010). "Balancing Development Costs and Sales to Optimize the Development Time of Product Line Additions," *Journal of Product Innovation Management* 27, 336–348.
- Lasagni, A. (2012). "How Can External Relationships Enhance Innovation in SMEs? New Evidence for Europe," *Journal of Small Business Management* 50, 310–339.
- Lee, C., K. Lee, and J. M. Pennings (2001). "Internal Capabilities, External Networks, and Performance: A Study on Technology-Based Ventures," *Strategic Management Journal* 22, 615–640.
- Lee, H., K. G. Smith, C. M. Grimm, and A. Schomburg (2000). "Timing, Order, and Durability of New Product Advantages with Imitation," *Strategic Management Journal* 21(1), 23–30.
- Lumpkin, G. T., and G. G. Dess (1996). "Clarifying the Entrepreneurial Orientation Construct and Linking it to Performance," *Academy of Management Review* 21(1), 135–172.
- (2001). "Linking Two Dimensions of Entrepreneurial Orientation to Firm Performance: the Moderating Role of Environment and Industry Life Cycle," *Journal of Business Venturing* 16(5), 429–451.
- Lynn, G. S., R. B. Skov, and K. D. Abel (1999). "Practices that Support Team Learning and their Impact on Speed to Market and New Product Success," *Journal of Product Innovation Management* 16(5), 439–454.
- Lyon, D. W., G. T. Lumpkin, and G. G. Dess (2000). "Enhancing Entrepreneurial Orientation Research: Operationalizing and Measuring a Key Strategic Decision Making Process," *Journal of Management* 26, 1055–1085.
- Madrid-Guijarro, A., D. Garcia, and H. Van Auken (2009). "Barriers to Innovation Among Spanish Manufacturing SMEs," *Journal of Small Business Management* 47, 465–488.
- Madrid-Guijarro, A., D. Garcia, and H. Van Auken (2013). "An Investigation of Spanish SME Innovation during Different Economic Conditions," *Journal of Small Business Management* 51, 578–601.
- Menon, A., and B. A. Lukas (2004). "Antecedents and Outcomes of New Product Development Speed: A Propositional Inventory Germane to Marketing," *European Journal of Marketing* 38(1/2), 209–223.
- Menon, A., J. Chowdhury, and B. A. Lukas (2002). "Antecedents and Outcomes of New Product Development Speed: An Interdisciplinary Conceptual Framework," *Industrial Marketing Management* 31(4), 317–328.
- Menon, S., J. Hansen, L. Nazarenko, and Y. Luo (2002). "Climate Effects of Black Carbon Aerosols in China and India," *Science* 297, 2250–2253.
- Meyer, M. H., and J. M. Utterback (1995). "Product Development Cycle Time and Commercial Success," *IEEE Transactions Engineering Management* 42(5), 297–304.
- Miller, D. (1983). "The Correlates of Entrepreneurship in Types of Firms," *Management Science* 29(7), 770–791.

- Molina-Castillo, F. J., and J. L. Munuera-Aleman (2009). "New Product Performance Indicators: Time Horizon and Importance Attributed by Managers," *Technovation* 29(10), 714–724.
- Montoya-Weiss, M., and R. Calantone (1994). "Determinants of New Product Performance: A Review and Meta-Analysis," *Journal of Product Innovation Management* 11(5), 397–417.
- Moreno, A. M., and J. C. Casillas (2008). "Entrepreneurial Orientation and Growth of SMEs: A Causal Model," *Entrepreneurship Theory and Practice* 32(3), 507–528.
- Naman, J. L., and D. P. Slevin (1993). "Entrepreneurship and the Concept of Fit: a Model and Empirical Tests," *Strategic Management Journal* 14(2), 137–153.
- Niedrich, R., and S. D. Swain (2004). "The Influence of Pioneer Status and Experience Order on Consumer Brand Preference: A Mediated-Effect Model," *Journal of the Academy of Marketing Science* 31(4), 468–480.
- O'Regan, N., A. Ghobadian, and M. Sims (2006). "Fast Tracking Innovation in Manufacturing SMEs," *Technovation* 26(2), 251–261.
- Parida, V., M. Westerberg, and J. Frishammar (2012). "Inbound Open Innovation Activities in High-Tech SMEs: The Impact on Innovation Performance," *Journal of Small Business Management* 50, 283–309.
- Pattikawa, L. H., E. Verwaal, and H. R. Commandeur (2006). "Understanding New Product Project Performance," *European Journal of Marketing* 40(11/12), 1178–1193.
- Podsakoff, P. M., and D. W. Organ (1986). "Self-Reports in Organizational Research: Problems and Prospects," *Journal of Management* 12(4), 531–544.
- Podsakoff, P. M., S. B. MacKenzie, J.-Y. Lee, and N.P. Podsakoff (2003). "Common Method Biases in Behavioral Research: A Critical Review of the Literature," *Journal of Applied Psychology* 88, 879–903.
- Rauch, A., J. Wiklund, G. T. Lumpkin, and M. Frese (2009). "Entrepreneurial Orientation and Business Performance: An Assessment of Past Research and Suggestions for the Future," *Entrepreneurship Theory and Practice* 33(3), 761–787.
- Rindfleisch, A., and C. Moorman (2001). "The Acquisition and Utilization of Information in New Product Alliances: A Strength-of-Ties Perspective," *Journal of Marketing* 65(2), 1–18.
- Rodríguez, J., P. Carbonell, and A. I. Rodríguez (2011). "Speed or Quality? How Order of Market Entry Influences the Relationship between Market Orientation and New Product Performance," *International Journal of Research in Marketing* 28(2), 145–154.
- Rosenau, M. D. (1990). *Faster New Product Development: Getting the Right Product to the Market Quickly*. New York: Amacom.
- Runyan, R., C. Droge, and J. Swinney (2008). "Entrepreneurial Orientation versus Small Business Orientation: What Are Their Relationships to Firm Performance?," *Journal of Small Business Management* 46(4), 567–588.
- Russell, R. D., and C. J. Russell (1992). "An Examination of the Effects of Organizational Norms, Organizational Structure, and Environmental Uncertainty on Entrepreneurial Strategy," *Journal of Management* 18(4), 639–656.
- Salavou, H., and S. Lioukas (2003). "Radical Product Innovations in SMEs: The Dominance of Entrepreneurial Orientation," *Creativity and Innovation Management* 12, 94–108.
- Schwenk, C. R., and C. B. Shrader (1993). "Effects of Formal Planning on Financial Performance in Small Firms: A Meta Analysis," *Entrepreneurship Theory and Practice* 17(3), 53–64.
- Shrivastava, P., and W. E. Souder (1987). "The Strategic Management of Technological Innovations: A Review and a Model," *Journal of Management Studies* 24, 25–41.
- Slater, S. F., and J. Narver (2000). "The Positive Effect of a Market Orientation on Business Profitability: A Balanced Replication," *Journal of Business Research* 48(1), 69–73.
- Smith, P. G., and D. G. Reinertsen (1991). *Developing Products in Half the Time*. New York: Van Nostrand Reinhold.
- Sok, P., and A. O'Cass (2011). "Achieving Superior Innovation-Based Performance Outcomes in SMEs Through Innovation Resource-Capability Complementarity," *Industrial Marketing Management* 40(8), 1285–1293.
- Srinivasan, R. (2008). "Sources, Characteristics and Effects of Emerging Technologies: Research Opportunities in Innovation," *Industrial Marketing Management* 37(6), 633–640.

- Stanko, M. A., F. J. Molina-Castillo, and J. L. Munuera-Aleman (2012). "Speed to Market for Innovative Products: Blessing or Curse?," *Journal of Product Innovation Management* 29, 751–765.
- Swierczek, F. W., and T. T. Ha (2003). "Entrepreneurial Orientation, Uncertainty Avoidance and Firm Performance: An Analysis of Thai and Vietnamese SMEs," *International Journal of Entrepreneurship and Innovation* 4, 46–58.
- Tatikonda, M. V., and M. M. Montoya-Weiss (2001). "Integrating Operations and Marketing Perspectives of Product Innovation: The Influence of Organizational Process Factors and Capabilities on Development Performance," *Management Science* 47(1), 151–172.
- Webb, J. W., R. D. Ireland, M. A. Hitt, G. M. Kistruck, and L. Tihanyi (2011). "Where Is the Opportunity without the Customer? An Integration of Marketing Activities, the Entrepreneurship Process, and Institutional Theory," *Journal of the Academy of Marketing Science* 39(4), 537–554.
- Wheelwright, S. C., and K. B. Clark (1992). *Revolutionizing Product development: Quantum Leaps in Speed, Efficiency and Quality*. New York: The Free Press.
- Wiklund, J., and D. Shepherd (2003). "Knowledge-Based Resources, Entrepreneurial Orientation, and the Performance of Small and Medium-Sized Businesses," *Strategic Management Journal* 24, 1307–1314.
- (2005). "Entrepreneurial Orientation and Small Business Performance: A Configurational Approach," *Journal of Business Venturing* 20(1), 71–91.
- Yang, Q., M. Zimmerman, and C. Jiang (2011). "An Empirical Study of the Impact of CEO Characteristics on New Firms' Time to IPO," *Journal of Small Business Management* 49, 163–184.
- Zahra, S. A., and J. G. Covin (1995). "Contextual Influences on the Corporate Entrepreneurship-Performance Relationship: A Longitudinal Analysis," *Journal of Business Venturing* 10(1), 43–58.
- Zahra, S. A., D. F. Jennings, and D. F. Kuratko (1999). "The Antecedents and Consequences of Firm-Level Entrepreneurship: The State of the Field," *Entrepreneurship Theory and Practice* 24, 45–65.
- Zhang, S., and A. B. Markham (1998). "Overcoming the Early Entrant Advantage: The Role of Alignable and Nonalignable Differences," *Journal of Marketing Research* 35, 413–426.
- Zimmerman, M. (2008). "The Influence of TMT Heterogeneity on the Capital Raised through an Initial Public Offering," *Entrepreneurship Theory and Practice* 32(3), 391–414.

Appendix

Entrepreneurial Orientation

	I disagree		I strongly agree		
	1	2	3	4	5
In general, the top managers of my business unit favor a strong emphasis on R&D, technological leadership, and innovations	1	2	3	4	5
In dealing with its competitors, my business unit typically initiates actions to which competitors then respond	1	2	3	4	5
In general, the top managers of my business unit have a strong proclivity for high-risk projects	1	2	3	4	5
When confronted with decision-making situations involving uncertainty, my business unit typically adopts a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities	1	2	3	4	5

Development Speed

The new product was developed . . .	I disagree		I strongly agree		
On or ahead schedule	1	2	3	4	5
Fast relative to how it could have been done	1	2	3	4	5
In less time than what was considered customary for our industry	1	2	3	4	5

Launching Speed

The new product was launched . . .	I disagree		I strongly agree		
On or ahead schedule	1	2	3	4	5
Fast relative to how it could have been done	1	2	3	4	5
In less time than what was considered customary for our industry	1	2	3	4	5

New Product Performance

The new product developed met . . .	I disagree		I strongly agree		
Profit objectives	1	2	3	4	5
Return on investments objectives	1	2	3	4	5
Market share objectives	1	2	3	4	5

Export Commitment and the Global Financial Crisis: Perspectives from the New Zealand Wine Industry

by Yang Yu and Val Lindsay

The study investigates how firms adjusted their export commitment in response to the recent global financial crisis. Findings based on New Zealand wine companies suggest that firms' commitment to exporting is influenced by both their export performance achieved before the crisis and the negative effect that the crisis exerted on their subsequent export performance. These two performance-induced influences can be further moderated by managerial attitude toward exporting and managers' perceptions of export market uncertainty. Theoretically, the study builds on the behavioral theory of the firm and extends the past performance–strategy relationship to the situation of exporting in a financial crisis.

Introduction

As result of the 2008 global financial crisis,¹ many export-oriented economies suffered due to the significant shrinking of consumer demand and rise of local protectionism in the major markets, including the United States and Europe (UNCTAD 2009). Research has shown macro-level evidence of firms' declining export performance and intensity (Greenaway, Kneller, and Zhang 2010), which is consistent with historical patterns that indicate trade decline occurring after economic depression (Grossman and Meissner 2010). However, to date, there has been less research on the effect of a financial crisis on exporting activities at the level of the firm, especially with respect to small and medium-sized firms (SMEs). For

many nations, their economic well-being is reliant on the export activity of SMEs; it is, therefore, important to gain insights into how they respond to situations of financial crisis in order for managers and governments to apply the appropriate remedies.

The purpose of this study is to enhance our understanding of the strategic responses of exporting firms to a global financial crisis. In this context, we explore how wine-producing firms involved in exporting responded to the 2008 global financial crisis, specifically with respect to their commitment to exporting. As an internationalization strategy, exporting typically involves more risks for firms than operating in the domestic market (Johanson and Vahlne 2009). With a strong export commitment, however, firms tend to accept the risks

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¹Although the official dates for the recent global financial crisis are usually regarded as 2007–2009 (National Bureau of Economic Research 2013), the effects of the crisis were generally not felt until early 2008 (including in New Zealand), and there continues to be debate about the official end date of the recession. Acknowledging this lack of clarity, we refer to the crisis throughout our paper as the “2008 global financial crisis.”

and invest sufficient resources to better enable the export venture to achieve the firm's goals (Bilkey 1978; Lages and Montgomery 2004; Shoham 1998). However, a financial crisis leads to dramatic and unpredictable environmental changes, which provoke firms to modify their strategies and operations in the market for the purpose of survival (Bao, Olson, and Yuan 2011; Chung et al. 2010). The 1997 Asian financial crisis and the more recent 2008 global financial crisis have led to an interesting body of research that investigates how firms have responded in, and subsequent to, these situations (e.g., Lee et al. 2009; Park et al. 2010). Responses of firms to such crises, and the consequent changes in their strategies, are often found to be diverse. For instance, they may adopt contrasting strategies (Chung et al. 2010; Latham 2009), or either defensive or expansive postures (Bao, Olson, and Yuan 2011). Lee et al. (2009) examined how Korean firms adjusted their export behaviors after the 1998 Asian economic crisis. Applying the real options perspective, they investigated how sudden reductions in domestic demand influenced the export performance of these firms, highlighting a positive relationship between flexible capabilities and export intensity in the postcrisis context. Though this and other studies make an important contribution to understanding the impact of financial crisis on firm behavior, this stream of research, as Lee et al. stated, remains less developed overall and warrants further academic input.

In contributing to this field of study, we examine the impact of the global financial crisis on export commitment. Our study provides originality by drawing on the behavioral theory of the firm to examine this issue—an approach widely used in strategic management (Kieser, Beck, and Tainio 2001) but less so in the context of exporting, and little, if any, in regard to exporter responses to the global financial crisis. By using this approach, we are able to examine firm-level behavioral responses to the financial crisis, as driven by performance outcomes. Pioneered by Cyert and March (1963) and developed by scholars over the past 50 years (Alessandri 2008; Augier 2004; Greve 2008; Ketchen and Palmer 1999), behavioral theory “explain(s) change as a consequence of feedback on performance or fitness of heterogeneous firms” (Massini, Lewin, and Greve 2005, p. 1551). In essence, it promotes the firm-level principle of using past performance, relative to

the firm's aspirations, as a guideline for deciding strategies for the following stages of activity. For example, Cyert and March (1963) used the theory to explain managerial decision-making in the context of organizational learning (learning from experience). Behavioral theory also highlights the role of individual cognition in decision-making processes of the firm (March and Olsen 1975). As early as 1958, March and Simon “pointed out that the link between the stimulus and response lies in the perceptions and reactions of the individuals in the organization,” whereby “certain stimuli trigger a fixed sequence of activities” (based on rules and routines; cited in Kieser et al. 2001, p. 599). In short, firm-level decisions are made on the basis of feedback from the firm's past performance relative to initial aspirations and on the cognitions (beliefs, knowledge and underlying mental models) of the firm's managers (Kim 1993; March and Olsen 1975).

Informed by this theoretical base, we then turn to the export literature for more detailed insight in exporters' responses to performance outcomes. Traditionally, many scholars have examined performance as an outcome variable, focusing on identifying its relevant antecedents (Cavusgil and Zou 1994). However, early research also shows that a firm's interest and emphasis on exporting are often stimulated by their achievements (Calof and Beamish 1995). Accordingly, there has developed a more recent interest in exploring the impact that performance has on an export firm's subsequent strategies (Navarro et al. 2011). The literature, in general, depicts a positive relationship between a firm's evaluation of its past export performance and its willingness to continue exporting (Lages and Montgomery 2004; Lages, Jap, and Griffith 2008). This also coincides with the view of international business scholars that internationalization mode, such as exporting, tends to change according to the outcomes that the firm has achieved using the mode (Benito, Petersen, and Welch 2009). In addition, recent work has focused on the role of potential interacting variables on the performance–strategy relationship, including the role of managerial cognition (Navarro et al. 2011; Shinkle 2011)—aspects that we explore further in this study.

We develop our conceptual model based on our review of the literature, incorporating two important factors. First, we differentiate firms' export performance before and after the crisis since we are concerned with the disruptive

impact caused by the financial crisis on firm performance and ongoing export commitment. For instance, a firm may have achieved strong export performance prior to the crisis but suffered performance deterioration since the crisis. Second, we pay attention to the role of individual managers in the export decisions relating to their firms' earlier performance outcomes, thus incorporating a cognitive dimension to the decision-making process being examined. Specifically, we investigate managerial attitude toward exporting (Bilkey 1978; Moini 1991), and managerial perceptions of market uncertainty (Lee, Makhija, and Paik 2008), proposing that these moderate the performance–strategy relationship. We base these proposals on the emphasis given in the export literature to managerial attitude in export-related strategic decision-making (Cavusgil and Nevin 1981; Dichtl, Koeglmaier, and Mueller 1990), and research showing that managerial perceptions of the environment can influence how a firm adapts to environmental changes (Chattopadhyay, Glick, and Huber 2001), especially in the situation of a crisis (Bao, Olson, and Yuan 2011; Pearson and Clair 1998). In so doing, we address calls in the literature for more emphasis on the role of cognition in export strategy, especially in terms of potential moderation roles (Stump, Athaide, and Axinn 1998). Following Lages, et al. (2008), we use firm-level export commitment to indicate the firm's strategic intention to commit resources to current and future export activities.

We draw on the New Zealand (NZ) wine industry as the context for our study and NZ wine exporters as the sample for our data analysis. New Zealand is a small open economy, and it entered into recession in June 2008, soon after the global financial crisis began (The Treasury 2010). Though the New Zealand government initially claimed to be the first OECD country coming out of the recession in June 2009, official figures later revealed that the economy suffered a double-dip recession, with the second leg coming in late 2010 (Fairfax Media 2012). Compared with many other industries in New Zealand, the wine industry remained reasonably strong throughout the recession but, nonetheless, did suffer substantial losses. Our survey was conducted in April 2010, allowing us to capture the effects of the 2008 financial crisis and firms' responses over the ensuing two-year period.

The study seeks to contribute to the literature in three ways. First, it enriches the extant knowledge of how exporters react to a global financial crisis. Second, it advances the application of the behavioral theory of the firm in export research, and also extends its application to the context of firm's export behaviors during and after the global financial crisis; this underpins the originality of the study. Third, the study develops insights into the role of managerial cognitions (specifically managerial attitude and perceptions of market uncertainty) in the firm's export-related decision-making behavior in the context of crisis. In addition, we introduce a crisis management perspective on export research, an aspect often neglected but has high relevance to vulnerable groups of small internationalizing firms, such as those found in small developed economies. In the next section, we describe the New Zealand wine industry, providing a contextual background to the study. Then, we review the relevant literature and develop our hypotheses. Next, we explain the research methodology and data collection process, followed by the presentation of the results. The findings, theoretical implications, and limitations of the study are then discussed.

The New Zealand Wine Industry

As a small country with just over four million population, businesses in New Zealand are predominantly small, with less than 1 percent having more than 50 employees (Ministry of Business, Innovation & Employment 2013). The wine industry is no exception. The industry has experienced rapid growth since the mid 1990s, with the number of wineries rising from fewer than 250 in 1996 to nearly 600 in 2008 (NZIER report to NZ winegrowers 2009). By 2010, the number rose to 672, and by 2012 reached 703. The growth figures show a steady increase over time, including through the 2008–2011 period (Wines of NZ 2012). In 2012, the New Zealand wine industry contributed over NZD 1.5 billion to the country's GDP and provided considerable job opportunities for regions.

Blessed with an ideal climate and soil conditions, New Zealand wines have gained international reputation for quality and value. A recent report shows that, in 2012, export earnings from the industry were NZD 1.2 billion, indicating a very high dependency of the industry on exporting and the high value of exports

relative to domestic sales (Deloitte 2012). As the report further notes, the wine industry is New Zealand's eighth most valuable export earning industry.

Like many industries in New Zealand, the wine industry was affected by the 2008 global financial crisis, due to its reliance on foreign sales. The industry was, therefore, subject to the effects of the crisis, not only on its domestic market but also on its international markets. The effects were not immediate, as the export growth between 2008 and 2009 increased to 24 percent, compared with a 16 percent average for the previous three years (NZ Wine Annual Report 2012). This rise is most likely due to a lag period in receipts of revenues from sales orders prior to the crisis, following a high level of marketing activity in the preceding years. However, growth in the 2009–2010 period declined sharply to 5 percent, with a similar low level of growth in the following year to the end of 2011. Most commentators attribute this to the global financial crisis (Deloitte 2012). In addition, despite ongoing, but slow, growth in the industry, export profitability fell, as some researchers had previously warned (Clayton and Stevens 2007). A key reason for this was that many wineries increased sales of bulk wine and grapes, forced by the low demand for bottled wines in international markets. Even though there was a decline in overall performance of the industry, there appeared to be some variation in performance outcomes among its constituent firms. For example, though some firms suffered large falls in profitability, others managed to maintain their profit margins over this time. Industry statistics report profitability changes ranging from a minimal decline to reductions in profit margins of over 12.5 percent during the 2009/10 fiscal year (Deloitte 2010). Reasons for this are unclear, but the data suggest a trend associated with firm size, which may relate to the larger firms retaining more sales of higher value bottled wine compared with bulk wine.

Given the context described, we believe that the New Zealand wine industry provides an ideal setting for our study, for two reasons. First, between 2008 and 2010, the continuing fallout from the global financial crisis meant that wine companies had to combat their declining financial performance in order to survive the crisis (Deloitte 2011) or maintain possession of their vineyards (Grigg 2011). This implies that many of those firms involved in

exporting felt the impact of the financial crisis and the need to react. Second, even though export revenues for the industry fell after the crisis, the industry overall showed ongoing growth and commitment to its export business. This provides the opportunity to explore how these industry dynamics translated at a firm level, and to examine the differential impacts of firms' prior performance on their export commitment.

Theory and Hypotheses

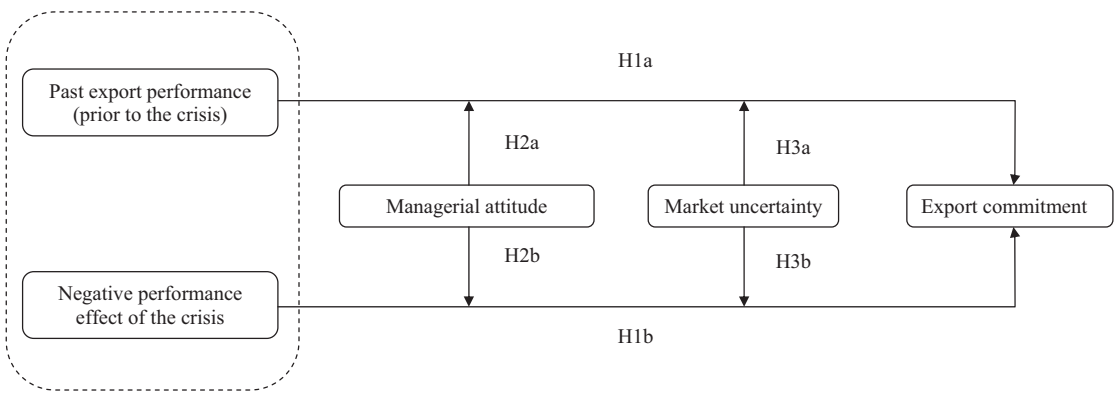
This section addresses the theoretical lenses through which we view and conduct our research. We draw on the behavioral theory of the firm as the foundational theoretical lens, and incorporate more recent concepts from the exporting literature. We use this theoretical base, along with our overarching research objectives, to develop and present our hypotheses. We present our conceptual framework in Figure 1 and develop research hypotheses in light of this framework.

The Direct Effects of Export Performance

Strategy and performance are reciprocally related in nature. Although most research has focused on the influence of strategy on performance, as many scholars point out (Ketchen and Palmer 1999; Lages and Montgomery 2004), understanding the implications of past performance on firms' subsequent strategy deserves equal attention. This is because performance provides a basis to examine strategy and informs firms of the need for refinement and alteration. Pioneered by Cyert and March (1963), the behavioral theory of the firm addresses this specifically, arguing that performance signals the effectiveness of strategy. If performance exceeds the aspiration level of firms, then firms tend to retain their existing strategy; once performance falls below the aspiration level, decision-makers will initiate problematic search for actions that help to reduce the aspiration/performance gap in the next stage of strategy development.

What remains somewhat controversial is how firms react to the "poor performance"—when performance is below the firm's aspiration levels. Traditionally, behavioral theory suggests that firms tend to be more risk taking in the face of poor performance, whereas scholars from the threat-rigidity perspective argue for risk aversion (Staw, Sandelands, and Dutton

Figure 1
Conceptual Model



1981). For example, threat-rigidity occurs when the firm senses crisis, and it responds with short-term goal-seeking behavior within its existing organizational domain (Ketchen and Palmer 1999). A number of studies have been conducted to reconcile these two competing, although overlapping, views (e.g., Greve 2010; Ketchen and Palmer 1999).

Behavioral theory of the firm directs our attention to the implications of past export performance on export strategy. Though there are many ways in which it has been operationalized, export performance can be defined broadly as the outcome achieved through international sales (Shoham 1998). In reviewing the export literature, we find that most studies consider export performance as the dependent variable, and focus on examining antecedents to performance (Cavusgil and Zou 1994). However, we also identify various studies that consider the relationship between export performance as a predictor variable, and a number of export strategy-based variables as the dependent. For example, Lages and colleagues have reported a positive relationship between firms' export performance and commitment to exporting strategy (Lages and Montgomery 2004; Lages et al. 2008). Likewise, Navarro et al. (2011) incorporate past export performance as part of an organizational learning construct and show that this is an antecedent of both export commitment and market adaptation by the firm.

Essentially, this literature stream suggests that firms' commitment to exporting can be

influenced by their past export performance, in accordance with behavioral theory perspectives. With poor export performance, the commitment can diminish, corresponding with the strategic view of internationalization. According to Benito et al. (2009), any mode of internationalization, including exporting, is associated with substantial costs and effort. If, following external or internal changes, a particular mode no longer represents a strategic opportunity in terms of international market development, firm behavior towards this mode may change accordingly.

In the present study, we utilize the performance-to-strategy link, grounded in behavioral theory as well as the export literature, to assist us with predicting firms' export commitment, as the dependent variable. Before we draw on these and proceed with developing hypotheses for the study, it is important to take a closer look at the unique situation of the 2008 global financial crisis. As researchers in the crisis management literature describe, a global financial crisis is caused by "poor societal planning and global monitoring," involves "widespread industrial accidents" (Mitroff, Shrivastava, and Udwadia 1987, p. 287), and takes place on a much larger scale and scope than any other firm- and industry-level crisis, with little predictability (Pearson and Clair 1998). Such crises are highly unpredictable and can have a significant impact on businesses (Mitroff, Shrivastava, and Udwadia 1987; Pearson and Clair 1998; Prebel 1997). For example, previous research shows that the majority of small businesses are

financially worse off following a financial crisis due to decline in sales and also to rising operating costs (Judd and Lee 1981). For firms that rely on international, as well as domestic, sales, the impact may be even higher as they are likely to be exposed to increased uncertainty and potentially more difficult market conditions (Johanson and Vahlne 2009).

To investigate the disruptive impact of a financial crisis on firm performance, we view performance feedback in two ways: performance before the crisis and performance after the crisis—that is, during the following two-year period. This can be further understood in terms of the different scenarios that firms may encounter. For example, a firm could suffer performance decline after the crisis, relative to a high level of performance prior to the crisis occurring. Alternatively, though less likely, postcrisis performance may be higher than that attained before the crisis. To illustrate, most New Zealand wine companies continued to show export volume growth after the 2008 financial crisis, even though at a reduced rate, but, more notably, many experienced sharp declines in export profitability. We attempt to capture the complexity of these performance considerations and assume that firms make their decision on whether to reinforce, or reduce, their commitment to exporting, according to both past (precrisis) and present (postcrisis) aspects of export performance. By taking into account the potential performance inconsistencies of firms experiencing a crisis, we develop two hypotheses as follows.

First, consistent with path dependency perspectives (Nelson and Winter 1982), a firm's past performance (e.g., prior to a crisis) reflects its accumulated knowledge, experience, capability, and confidence regarding its export markets (Filatotchev et al. 2009). Behavioral theory of the firm also suggests that firms achieving satisfactory performance tend not to change their strategy, particularly if they have built up organizational slack and a repository of effective competences (Kieser et al. 2001). This is consistent with international business theorists, who state that the past experience of a firm with a foreign operation mode can create its own bias when firms determine whether to increase or decrease investments in the mode (Benito et al. 2009). As such, positive outcomes achieved in the past may create a degree of "mode inertia" (Benito et al. 2009) for firms. That is, they display a tendency to retain the

existing level of commitment to the current mode, rather than look for alternatives (Calof and Beamish 1995), even though this may be a constraining factor in the evolution of their longer-term strategies (Lovas and Ghoshal 2000).

In the export literature, a number of performance measures are commonly applied, with sales, export intensity, and profit margins being commonly used (Leonidou, Katsikeas, and Samiee 2002). Export sales (revenue) is a standard indicator of export performance, where an increase in sales revenue is interpreted as an improved export performance. However, as the NZ wine industry experience illustrates, export sales revenue should be considered alongside export profitability (profit margin) since an increase or decrease in revenue may simply be a reflection changes in profitability, rather than sales volume. Export intensity is also a commonly used measure of export performance, reflecting changes in the ratio of export sales to domestic sales. Increasing export intensity is generally indicative of improved export performance (Cavusgil and Zou 1994), although, as noted by Lee et al. (2009), a change in export intensity could result purely from changes in a firms' domestic business. Behavioral theory suggests that high-performing exporting firms are those that have acquired sufficient experience, confidence, and capabilities to maintain a commitment to exporting, even in the face of environmental change, such as a financial crisis.

Drawing on these arguments, we suggest that, with high levels of export performance (high levels of growth in sales, profitability, and export intensity) prior to the crisis, firms are more likely to display a high commitment toward exporting following the crisis.

H1a: The better their export performance prior to the crisis, the more firms will be committed to exporting after the crisis.

The second hypothesis deals with the potential negative effects of the global financial crisis on firms' export performance. According to Pearson and Clair (1998), when a crisis happens, firms try to minimize any detrimental effects in order to survive. Under this circumstance, performance achieved during, or following, the crisis triggers firms to consider whether or not their current level of involvement in exporting is appropriate or if it should

be adjusted accordingly. However, research findings vary on how firms make these adjustments.

As discussed, behavioral theory suggests that firms are more likely to demonstrate risk-taking behavior while encountering poor performance. The larger the performance aspiration gap, the greater the risk taken by firms in their search for alternative strategies (Argote and Greve 2007). On the other hand, Kunc and Bhandari's (2011) description of a "reactive strategic development process" during crisis suggests that if performance is affected negatively, firms respond to the short-term problem by reducing investments in the export market for the next time period concerned. Similarly, Thaler (2000) found that when a situation appears to be threatening, risk-averse practices are often favored, in order to ensure a degree of control for the firm.

Risk-averse behavior is especially evident in small firms, which have limited resources (Coviello and McAuley 1999). Empirical studies support this view, reporting that in times of environmental uncertainty, smaller firms act in a more risk-averse manner than larger firms due to concerns of additional losses that may jeopardize their survival (Audia and Greve 2006; Greve 2010). Given that exporting implies operational risks and continuous resource demands for firms (Johanson and Vahlne 2009), small exporters would be expected to demonstrate risk-averse behavior by, for example, reducing export commitment.

Further, firms with small domestic markets are more likely to rely on export markets for sales and profit (Coviello and McAuley 1999), meaning that they are more highly exposed to changes in export demand. International diversification can be a way of offsetting risks in certain export markets; this is relevant because not all export markets would necessarily experience the same level of decline, and some may not decline at all. However, international diversification is generally associated with larger firms, as small firms seldom have sufficient resources to develop a portfolio of export markets. Thus, we suggest that, in contrast to the findings of Lee et al. (2009), small exporting firms would adopt a conservative approach in a financial crisis and seek to sustain their businesses using alternative, low-risk approaches, such as shifting their focus back to the domestic market. Based on the previous discussion, we present the hypothesis as follows.

H1b: The more negative the effects of the crisis on firms' export performance, the less firms will be committed to exporting in the recessionary period.

The Moderating Effects of Managerial Attitude and Perceived Market Uncertainty

The two hypotheses presented in the last section address the firm-level rationale for a firm's strategic reaction to performance feedback. The extent to which firms' behaviors reflect this rationale, however, depends on their managers. For example, Chattopadhyay, Glick, and Huber (2001) argue that a firm's reactions to environmental changes are influenced by how its managers interpret these changes, thus introducing a cognitive component. Similarly, in dealing with a crisis, scholars point out that firms' approaches are often shaped by managers' cognitive, assumptive, and emotional responses to the crisis (Pearson and Clair 1998; Weick 1988). Also, scholars in international business have underlined the active role played by managers in influencing firms' foreign operations (Brouthers and Hennart 2007; Katsikeas 1996). Buckley, Devinney, and Louviere (2007) particularly emphasize that for a comprehensive understanding of firm behavior in internationalization, researchers should consider the interplay between firm-level and individual manager-level rationalities.

Further, following the central notion of bounded rationality, behavioral theory highlights the importance of individual actions based on individual beliefs (March and Olsen 1975), thus distinguishing between cognitive and behavioral influences in strategic decision-making. Indeed, aspirations largely comprise managerial cognitions (Fiegenbaum, Hart, and Schendel 1996), and cognition has long been recognized as an important part of strategic decision-making (Eisenhardt and Zbaracki 1992; Gary and Wood 2011). Scholars have continued to develop this research interest in various contexts. Winter, Cattani, and Dorsch (2007), for example, examine the interplay between cognition and local feedback as a result of postperformance search activities of firms.

More recently, interest has emerged concerning the role of moderators in the performance-strategic behavior link (Shinkle 2011), amid claims that this area has been understudied (Vissa, Greve, and Chen 2010).

Drawing on behavioral theory (Cyert and March 1963), and strategic planning, strategic choice theory (Child 1972), and strategic reference point theory (Fiegenbaum, Hart, and Schendel 1996), all of which are concerned with the aspiration–strategic consequence relationship, Shinkle (2011) provides an integrated theoretical perspective to explain the moderation effect of individual cognitive factors (such as managerial perceptions and self-efficacy) on the relationship between aspirations and strategic outcomes.

In line with these scholarly insights regarding cognitive factors, we focus on two managerial-level variables—managerial attitude toward exporting and managers' perceived export market uncertainty—and argue for their moderating effects on the relationships proposed earlier (see H1 and H2).

Managerial Attitude. Managers differ in their attitudes towards exporting. Scholars have tended to highlight the positiveness of such attitudes, describing managers as having a strong view of exporting as an inherently attractive idea for firms (Bilkey 1978) and belief about the value of exporting (Reid 1983). Though a positive relationship between managerial attitude toward exporting and export behavior has been widely shown and accepted, there are also many studies revealing a negative relationship—the well-recognized phenomenon of attribute-behavior inconsistency (Eshghi 1992). Initially regarded as result of measurement errors (Bilkey 1978), scholars have presented rationales for the inverse relationships, which provide alternative explanations, based on the observed behavioral responses of exporting firms (Eshghi 1992). For example, it is mentioned that managerial attitude often reflects relatively long-term strategic goals, rather than anticipated immediate benefits, such as profit (Bilkey 1978). In the same vein, research also suggests that positive managerial attitude often goes beyond the economic considerations of firms (Beleska-Spasova and Glaister 2011; Moini 1991). This implies that managers will not necessarily change their intrinsic attitude toward exporting in a crisis situation, though whether or not this assumption would hold has yet to be tested. Extending this logic, however, we propose that, in a situation of crisis, managerial attitude towards exporting modifies the relationships between pre and postcrisis export performance and

firm-level commitment to exporting strategy. This is discussed further, as follows.

First, people see what they want to see. In psychological terms, this phenomenon is described as motivated reasoning or self-affirmation (Kunda 1990), meaning that individuals have the tendency to reach a preferred conclusion to the extent that they can make a justifiable case for doing so. Particularly, they are concerned with satisfying goals, and they make favorable judgments when the outcome appears to be positive (Agrawal and Maheswaran 2005). With regard to exporters, managers having a positive attitude toward exporting tend to be equally positive about facilitating firm-level export decisions and encouraging export behaviors (Katsikeas 1996). If a firm has achieved a high level of export performance in the past, then motivated reasoning theory suggests that those managers would be keen to utilize this fact to affirm their view that exporting as a strategy is worth further pursuit and investment, even in the face of a crisis. A positive managerial attitude toward exporting also suggests that there would be little impediment within the firm to drawing on past export success, in order to support decision-making in favor of ongoing commitment to exporting. Likewise, in response to negative performance effects in a crisis, managers with a positive attitude toward exporting would tend to be less influenced by the negative outcomes and defend their positive view on the strategy (Agrawal and Maheswaran 2005), even in the face of potential risks.

Second, research shows that managers with a positive attitude toward exporting are generally equipped with a greater understanding of foreign markets (Johnston and Czinkota 1985), benefiting from organizational and individual learning (March and Olsen 1975). From a knowledge perspective, those managers should be more capable of, and confident in, dealing with the challenges arising in a crisis. As experienced decision-makers, they also tend to focus selectively on the evidence of their past ability to overcome obstacles and act less conservatively (Sitkin and Pablo 1992), in accordance with behavioral theory. Thus, despite any negative performance effects experienced, those managers would still recognize the long-term benefit of engaging in international markets, rather than be overshadowed by the short-term impact of a crisis. In other words,

even though they may react to performance problems in a crisis, negative effects could be less concerning for them.

Based on the previous discussion, we propose the moderation effects of managerial attitude toward exporting on the relationships described in the previous two hypotheses.

H2a: The relationship between export performance prior to the crisis and firm commitment to exporting will become more positive when managers have a positive attitude toward exporting.

H2b: The relationship between negative performance effects resulting from the crisis and firm commitment to exporting will become less negative when managers have a positive attitude toward exporting.

Perceived Market Uncertainty. Organisations and their environment are in constant flux, and there are different stimuli at different levels (Cohen, March, and Olsen 1972). Thus, organizations exist in a state of uncertainty. Uncertainty avoidance is a fundamental tenet of behavioral theory, as it is intricately connected with the concept of bounded rationality in which organizational learning is rooted. Bounded rationality occurs because “individuals cannot fully process information in uncertain and continuously changing environments” (Kieser et al. 2001, p. 618). In studying the role played by environmental dynamism in a firm’s decision, scholars have paid a great deal of attention to market uncertainty perceived by managers (Butler, Doktor, and Lins 2010; Lopez-Gamero, Molina-Azorin, and Claver-Cortes 2011). As described in Milliken’s (1987) seminal work, perceived market uncertainty exists when managers of a firm are uncertain as to how the environment may change, are unable to predict how the environmental change would affect them, and are unable to forecast the outcome of any actions they may undertake with respect to the environment. In keeping with behavioral theory, managerial capacity to perceive environmental impacts increases over time as managers learn and gain experience (Shinkle 2011). Reducing uncertainty and risk associated with exporting through information gathering and learning (Racela, Chaikittisilpa, and Thoumrunroje 2007) is consistent with increased commitment by managers to provide necessary

resources for exporting (Armario, Ruiz, and Armario 2008).

Several studies have identified the moderation of the aspiration–consequences relationship by environmental factors (e.g., Kellermanns et al. 2005), whereas others have shown a similar effect of environmental uncertainty (e.g., Levinthal and March 1981). We extend this research in our study by looking at the role of managerial cognition, with regard to environmental uncertainty, and employing the construct, perceived market uncertainty. We shed light on the impact of this variable in the export performance–strategy link and propose that the uncertainty perceived by managers regarding their export markets can moderate the relationships presented in the two base hypotheses. This is discussed as follows.

First, we suggest that high perceived market uncertainty will weaken the relationship between export performance before a crisis and firms’ commitment to exporting. Research has shown that when the environment is perceived as uncertain or threatening, managers are motivated to draw more on procedural rationality in the decision-making process (Alessandri 2008), conducting more environmental scanning and strategic planning (McGee and Sawyerr 2003). In practice, this can direct managers’ attention to a wider range of factors for more objective considerations, suggesting a relatively smaller role played by past performance in determining firm-level commitment to exporting. Additionally, managers perceiving high uncertainty would likely be more aware of changes occurring in the international marketplace, as a result of a financial crisis, for example, national governments tightening their trade regulations, monetary markets becoming highly unstable, and consumer demand in most overseas markets declining significantly. As Milliken (1987) and Shimizu and Hitt (2004) note, it is difficult to accurately assess and predict the potential outcomes of a strategy in an uncertain environment. Bearing this in mind, managers may draw less on their firm’s previous performance in their decision-making in a time of crisis.

Second, we argue that perceived market uncertainty can influence managers’ responses to negative performance effects resulting from the crisis. In the case of low perceived market uncertainty, Qian, Cao, and Takeuchi (2013) found that managers are less likely to see the

need to be strategically alert; therefore, they would be less responsive to any negative performance effects, and their responses would tend to be less protective. By contrast, high perceived market uncertainty should heighten the concern of managers about negative performance effects arising from by the crisis, leading to further reduction in firm commitment to exporting. With high perceived market uncertainty, managers tend to behave cautiously, due to their inability to predict, and lack of control over, external events (Milliken 1987). As a result, the potential threat signaled by a negative performance caused by a crisis would be reinforced and viewed by managers as even more alarming. In this case, their risk aversion becomes more observable in their firm's behaviors, reflected in a reduced firm commitment to exporting.

Drawing on the previous discussion, we suggest that managerial perception of market uncertainty influences the decision-making process of a firm through its moderating effects on the performance–strategy relationship. This is presented as follows.

H3a: The relationship between export performance prior to the crisis and firm commitment to exporting will become less positive when market uncertainty is perceived as high.

H3b: The relationship between negative performance effects resulting from the crisis and firm commitment to exporting will become more negative when market uncertainty is perceived as high.

Methods

We use a quantitative methodology for our study since we are testing the hypotheses developed in the previous section. This section provides details of the approach applied.

Data Collection and Sample

The study was conducted on New Zealand SME wine companies involved in exporting. In line with the purpose of the study, our target population of firms included those that had exported for at least three years prior to the crisis and were still exporting at the time of the study. Within this population, firms were diverse in terms of geographic location (across both the South and North Islands of the country), size, turnover, and product focus

Table 1
Demographic Information of the Sample

Demographic Information	Number of Firms/Respondents
2009 Annual Sales (NZD mil)	
0–1	8
2–5	21
6–10	24
10+	12
Firm Size by Full-Time Equivalents (FTEs)	
1–19	49
20–39	5
40–59	4
60–79	1
80+	6
Years of Exporting by 2010	
5–6	8
7–8	14
9–10	16
10+	27
International Diversification	
1–2	13
3–4	15
5–6	13
7–9	5
10+	19
Foreign Ownership	
No	53
Yes	12
Education Level of Respondents	
High School	11
University and Above	54
Age of Respondents	
20–35	6
36–45	14
46–55	26
55+	19

(bulk wine versus bottled wine). Table 1 provides the demographic information for our sample of 65 respondent firms from this target population of wine companies.

In April 2010, we identified approximately 400 wine companies nationwide from the target population using a public database and relevant company websites. These companies accounted for nearly 57 percent of the country's wine companies in total. In approaching these companies via telephone, we first

established whether or not they had been exporting continuously over the past five years (from 2005 onwards), in order to exclude sporadic exporters from the study, according to recommendations by Katsikeas (1996). This also ensured that the firms had achieved a level of export performance prior to the 2008 crisis. As a result, the number of potential participant firms suitable for the study was reduced to approximately 280. Second, given that most New Zealand wine companies are relatively small, we were able to contact the owner-managers of the remaining wine companies and explain the research project to them. Specifically, we emphasized that we sought respondents actively involved in the decision-making process of the firm. For those expressing their interest in the research, we invited them to participate in our online survey and emailed them the research documents.

We administered the questionnaire using Qualtrix, an online survey instrument. Managers were able to access the survey via the web link provided in their formal email invitation. The survey was administered between April 2010 and May 2010, during which period a reminder email was sent. In total, 102 responses to the survey were recorded in Qualtrix. Of these 102 responses, 65 were complete and usable, resulting in an overall 23.2 percent response rate. We checked for nonresponse bias, as recommended by Armstrong and Overton (1977), by comparing the annual sales and years of exporting between the early and late respondents; t-tests suggest no significant differences between the two groups. Further, based on the annual sales category figures, the sample contained wine companies in all major categories, indicating that it was representative of the focal industry (Deloitte 2010). We recognize that the study is limited by being based on a small sample size. However, though not desirable, this is not uncommon for research on small businesses (Mullen, Budeva, and Doney 2009), particularly in international business (Stump et al. 1998). We discuss this limitation more fully later in the paper.

Measures

For all of our variables, we used perceptual measures. Although this is not always considered ideal for performance measures, since objective measures can overcome issues of perceptual bias (Ketokivi and Schroeder 2004), previous studies have shown perceptual and

objective measures of performance to be well correlated (Dess and Robinson 1984; Venkatraman and Ramanujam 1986), and many other researchers have used perceptual measures of export performance (e.g., Leonidou, Katsikeas, and Samiee 2002; Lu et al. 2010). Researchers have long highlighted the difficulties associated with gaining objective data from small, privately held firms (e.g., Dess and Robinson 1984). As these authors note, performance data for such firms are not publicly available, and managers are often extremely sensitive about sharing information of this nature. This phenomenon is evident in the New Zealand context, with objective data on SMEs' operations and performance rarely being made available (Deng, Duffy, and Harrison 1995). Given our behavioral theoretic perspective, which is concerned with how firms respond to performance outcomes, it could be argued that managerial perceptions of performance outcomes are of more relevance to the ensuing behavioral responses than objective measures since managers operate within a context of bounded rationality. As discussed earlier, studies using a behavioral theory approach show that managerial interpretations of performance relative to aspirations vary, depending on a number of conditions, including managerial cognitions, environmental factors, and managerial and firm experience. In a similar vein, Sutcliffe and Huber (1998) suggest that perceptual measures are more appropriate for environmental uncertainty. Thus, while recognizing the basic limitations of using perceptual measures, our approach is in line with earlier research utilizing these, rather than objective, measures.

Dependent Variable. There is no consistently agreed definition of export commitment in the literature. *Export commitment* has been conceived of as either an attitude (Bello and Barksdale 1986) or as a behavior (Cavusgil and Zou 1994; Lages et al. 2008). Still, others perceive export commitment as a multidimensional construct comprising both attitude and behavior (Stump et al. 1998), or as a construct in which attitude and behavior are reciprocally related (Leonidou, Katsikeas, and Piercy 1998). A further inconsistency in the literature is the use of the export commitment construct either at the managerial level (Morgan 1997) or at the firm-level (Lages et al. 2008; Navarro et al. 2011). In our study, we adopt the conceptual-

ization of export commitment as a firm-level behavior, reflecting an intention of the firm to commit resources to achieving a desirable performance outcome, following Lages et al. (2008).

To measure firm commitment to exporting, we draw upon Lages and Montgomery (2004, p. 1193) who define such commitment as “the degree to which organizational and managerial resources are allocated to exporting ventures,” and on an adaptation of the measures these authors adopted from the original work of Cavusgil and Zou (1994). Our scale consists of six items which capture firms’ planning for exporting, and the information search and sales-generating business development activities exhibited by firms, as well as their plans for new product and new market entry. The scale is shown in Table 2.

Independent Variables. There has been much debate in the export literature about measures of export performance, with no agreed or consistent indicator or measure for this construct in the literature (Francis and Collins-Dodd 2000); rather, quite different approaches to measurement for export performance can be identified (Cavusgil and Zou 1994; Lages et al. 2008; Murray, Gao, and Kotabe 2011). In this study, we measure the first independent variable, *past export performance* (export performance prior to the crisis) by assessing managers’ perceptions concerning their firms’ performance changes across three dimensions, which are among the most widely used in the export literature: export sales, export intensity, and export profitability, over a three-year time period (2005–2007, inclusive). The theoretical rationale for using these measures is presented earlier. The decision to capture the “changing component” of the scale was influenced by the works of Rose and Shoham (2002) and Francis and Collins-Dodd (2000). The three-year timeframe accords with Bruning (1995), who used past export performance to predict a firm’s current export behavior. To assess the second independent variable, *negative performance effects* of the crisis, we used three items, corresponding to those used for past export performance. Specifically, we asked respondents to review the extent to which their export sales, export intensity, and export profitability in their export market(s) had been affected negatively since 2008. We used the terms “strongly disagree and strongly agree” to

describe the scale, accommodating the possibility that not all firms experienced negative effects on export performance. The scales for the two independent variables are displayed in Table 2.

Moderating Variables. Table 2 shows the measures used for the moderating variables. The scale for examining *managerial attitude* toward exporting is derived from the previous work of Moini (1991) and Kedia and Chhokar (1985). We used four items to examine managerial attitude, addressing managers’ attitudes towards the potential contribution of exporting to their firms’ growth and profitability, the worthiness of exporting, and the importance of fulfilling export demands. Similar items were used by Lukas, Whitwell, and Hill (2007) to assess managerial belief in the value of exporting, and attitudes towards export-related tasks. With regard to *perceived market uncertainty*, we adapted four items from Martin-Tapia, Aragon-Correa, and Senise-Barrio’s (2008) work relating to the financial crisis; essentially, these items deal with managers’ perceived difficulty in predicting the external environment, particularly regarding the export market.

Control Variables. Three organizational variables acted as controls in the study. First, international diversification is often considered to be relevant to a firm’s international business activities (Beleska-Spasova and Glaister 2010). We measured this by the number of foreign countries that a wine company exported to at the time of the survey (1 = 1–2, 2 = 3–4, 3 = 5–6, 4 = 7–9, and 5 = 10 or more). Second, firm size is known to be related to firms’ export behavior (Bonaccorsi 1992; Calof 1994). We were also aware of potential influence of firm size on profitability changes in the wine industry (see Introduction), suggesting that this variable should be included. We measured firm size by the number of full-time equivalent employees in the firm (1 = 1–19, 2 = 20–39, 3 = 40–59, 4 = 60 = 79, 5 = 80 or more). Third, on the basis that a foreign-owned firm might have a stronger emphasis on exporting, we controlled for the ownership structure of the wine companies in terms of whether or not they had a foreign ownership stake (0 = no; 1 = yes).

In the survey questionnaire, we used a 5-point Likert scale to measure the items belonging to the independent and dependent variables, and adapted the terms describing the

Table 2
Measurement Items for Variables

Measurement Items	Total Variance (Percent)	Cronbach's Alpha
Export Commitment (1 = Strongly Disagree; 5 = Strongly Agree)	57.8	0.84
1. Our company plans to increase its involvement with export market		
2. Our company gives serious consideration to exporting		
3. Our company is considering new export markets to enter		
4. Our company actively seeks export market information		
5. Our company is working on new product ideas for exporting in the near future		
6. Representatives from our company attend a number of trade fairs/missions abroad		
Past Export Performance (Before the Crisis [2005–2007])		
1. Please indicate the degree of change that your company's export venture has experienced between 2005 and 2007 (1 = Strongly Negative; 5 = Strongly Positive)	71.9	0.80
a. Three-year change in export sales		
b. Three-year change in export intensity (export sales as a percentage of total sales)		
c. Three-year change in export profit margin		
Negative Performance Effects of the Crisis (2008–2010) (1 = Strongly Disagree; 5 = Strongly Agree)		
1. Since the financial crisis, our company's total export sales has been affected negatively	74.1	0.82
2. Since the financial crisis, our company's export intensity (export sales as a percentage of total sales) has been affected negatively		
3. Since the financial crisis, our export profit margin has been affected negatively		
Managerial attitude (1 = Strongly Disagree; 5 = Strongly Agree)	74.6	0.89
1. Exports can make a major contribution to our company's growth		
2. Exports can make a major contribution to our company's profits		
3. Exporting is too complicated to be worth the effort (reverse coded)		
4. Our company always tries to fill export orders		
Perceived Market Uncertainty (1 = Strongly Disagree; 5 = Strongly Agree)	65.5	0.82
1. As a result of the global financial crisis, the environmental factors affecting our company (technology, customer, preferences, suppliers, regulation, etc.) change very often		
2. The financial crisis has made it quite difficult for our company to obtain positive results		
3. The financial crisis has meant that the business environment factors affecting our company are very numerous		
4. The financial crisis has meant that the business environment factors affecting the operation of our company are very varied		

items accordingly, as shown in Table 2. We also conducted factor analysis and reliability tests for the items measuring each variable. In Table 2, it can be seen that the independent and dependent variables all show high Cronbach's alpha scores, which are acceptable and crucial for testing moderation effects (Frazier, Tix, and Baroon 2004).

Common Method Bias and Endogeneity

Being aware of potential common method bias resulting from using perceptual data, we followed Podsakoff et al. (2003) recommendations. First, we randomized the questions in the survey and assured respondents of the confidentiality of this study and that there were no right or wrong answers—only that their opinion mattered in the survey. We also adopted a careful survey design and administration practices, as already described. Second, using the data obtained, we conducted a Harman's one-factor test to detect common method variance (Harman 1976). We extracted five factors with eigenvalues greater than 1.0, and the largest factor explained 25.7 percent of the total variance (well below 50 percent), suggesting common method bias is not a significant problem in the study.

We acknowledge the potential for an endogeneity problem as a limitation in our study. Though a number of approaches can be used to avoid endogeneity, such as the use of instrumental variables (Hamilton and Nickerson 2003), we were unable to incorporate these in our analysis. This issue is discussed further in the Limitations section of the paper.

Data Analysis and Results

The means, standard deviations, and correlations for the variables are presented in Table 3. Some of the significant correlations deserve mention. For example, a moderate positive correlation between past (precrisis) export performance and negative performance effects of the crisis is noted. Although this is not the main focus of the study, it suggests that those firms performing particularly well prior to the crisis suffered a stronger negative impact of the crisis on their subsequent export performance. We explored this assumption further by examining the data for associations between the individual items for negative performance and several firm characteristics. This identified a strong positive correlation between the item,

“negative effect on export intensity” and both international diversification and firm size. We can, therefore, tentatively explain the association between pre and postcrisis performance on the basis of the “best performers” being those larger and more internationally diversified firms, and the negative impact arising predominantly from changes in export intensity (not on sales or profitability). Since these firms would be expected to be more resilient to impacts of the crisis, this finding is somewhat surprising. However, they would likely adopt more strategic approaches to the crisis, which might include deliberate strengthening of their domestic business, while maintaining their level of exports—thus showing reduced export intensity but unaffected export sales and profitability. Further research is warranted to examine these possibilities further. Given the significant relationships shown in Table 3, we included an assessment of variance inflation factor (VIF) scores in order to ensure that multicollinearity was not a problem in our results. The highest VIF was 2.18, well below the accepted value of 10, indicating that multicollinearity was not a concern.

We followed Baron and Kenny's (1986) recommended approach to test the interaction terms via hierarchical regressions. In running the multiple regression analysis in SPSS, after centering the data (Frazier et al. 2004), we sequentially included the control variables, independent variables, and moderator variables (Table 4: models 1–4). Since the control variables did not contribute significantly to the dependent variable, we excluded them from the models and re-ran the regressions (Table 4: models 5–7). We then ran the interaction terms in the regression model. Because of the small sample, we tested the two moderators separately (Table 5: models 1–3 and 4–6). Using this modified approach, we managed to meet the “10 observations per variable” rule recommended for multiple regressions (Field 2009). Results for the models without the interaction terms are shown in Table 4; results for the interaction terms with the two moderators are displayed in Table 5. Since none of the three control variables were associated with a significant coefficient, we pay attention primarily to models 5, 6, and 7 in Table 4 and models 3 and 6 in Table 5.

Our first two hypotheses address the relationships between the two performance-related variables and firms' export commitment.

Table 3
Descriptive Statistics and Correlations ($n = 65$)

	1	2	3	4	5	6	7	8
1	Export Commitment	1						
2	Past Export Performance	0.292**	1					
3	Negative Performance Effects	-0.180	0.326**	1				
4	Managerial Attitude	0.675***	-0.078	-0.040	1			
5	Market Uncertainty	0.041	-0.181	-0.645***	-0.103	1		
6	Firm Size	0.156	-0.202	-0.183	0.136	0.004	1	
7	International Diversification	0.102	-0.119	-0.053	0.241*	0.018	0.685***	1
8	Foreign Ownership	-0.134	-0.080	0.027	-0.046	-0.120	0.118	0.119
	<i>Mean</i>	4.01	3.41	2.38	4.28	3.55	1.71	3.02
	<i>Standard Deviation</i>	0.70	0.83	1.01	0.79	0.81	1.42	1.52

*** $p < .01$

** $p < .05$

* $p < .10$

Table 4
Multiple Regression Results

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Constant	-0.179 (0.313)	-0.241 (0.295)	0.100 (0.200)	0.100 (0.203)	0 (0.126)	0 (0.083)	0 (0.084)
Past export Performance (EP)		0.387*** (0.137)	0.417*** (0.091)	0.416*** (0.092)	0.372*** (0.134)	0.420*** (0.088)	0.419*** (0.089)
Negative Performance Effect (NE)		-0.274** (0.136)	-0.269*** (0.090)	-0.262** (0.120)	-0.300** (0.134)	-0.279*** (0.088)	-0.271** (0.117)
Managerial Attitude (MA)			0.701*** (0.088)	0.702*** (0.090)		0.698*** (0.084)	0.699*** (0.086)
Market Uncertainty (MU)				0.010 (0.116)			0.012 (0.113)
International Diversification	0.047 (0.096)	0.056 (0.089)	-0.044 (0.060)	-0.045 (0.061)			
Firm Size	0.065 (0.093)	0.079 (0.088)	0.040 (0.059)	0.040 (0.060)			
Foreign Ownership	-0.416 (0.362)	-0.347 (0.333)	-0.189 (0.222)	-0.186 (0.227)			
Adjusted R ²	-0.015	0.117	0.610	0.602	0.127	0.621	0.614
F Ratio	0.739	2.429**	15.091***	12.669***	4.919**	30.528***	22.455***
N	65	65	65	65	65	65	65
Maximum Variance Inflation Factor (VIF)	1.12	1.17	1.17	1.97	1.11	1.11	2.01

Dependent variable: firm commitment to exporting.
 Unstandardized coefficients are reported in the table. *** $p < .01$; ** $p < .05$; * $p < .10$.
 Models 1-4: control variables included.
 Models 5-7: control variables excluded.

Table 5
Multiple Regression Results: Moderation Effects of Managerial Attitude and Market Uncertainty

Managerial Attitude (MA)	Market Uncertainty (MU)					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Constant	0 (0.126)	0 (0.083)	-0.003 (0.083)	0 (0.126)	0 (0.127)	-0.010 (0.145)
Past Export Performance (EP)	0.372*** (0.134)	0.420*** (0.088)	0.423*** (0.092)	0.372*** (0.134)	0.380*** (0.135)	0.446*** (0.135)
Negative Performance Effect (NE)	-0.300** (0.134)	-0.279*** (0.088)	-0.236** (0.091)	-0.300** (0.134)	-0.384** (0.175)	-0.449*** (0.182)
Managerial Attitude (MA)		0.698*** (0.084)	0.628*** (0.095)	Market Uncertainty (MU)	-0.126 (0.168)	-0.114 (0.163)
EP × MA			-0.117 (0.120)	EP × MU		-0.410**
NE × MA			0.123* (0.071)	NE × MU		(0.169)
Adjusted R^2	0.127	0.621	0.629	0.127	0.119	(0.123)
F Ratio	4.919**	30.528***	19.285***	4.919**	3.439**	0.182
N	65	65	65	65	65	3.404**
Maximum VIF	1.11	1.11	1.87	1.11	1.88	65
						2.18

Dependent variable: firm commitment to exporting.
Unstandardized coefficients are reported in the table. *** $p < .01$; ** $p < .05$; * $p < .10$.

Table 4 shows that firms' past export performance (2005–2007 inclusive) is positively related to the dependent variable across models 5, 6, and 7 ($p < .01$), suggesting that the better a firm performed in exporting before the crisis, the more likely it had a strong commitment to exporting postcrisis. On the other hand, a negative relationship is found between the negative performance effect of the crisis and the dependent variable ($p < .05$), suggesting that the more negative the effect on performance, the lower the firm's export commitment is. Hence, both H1a and H1b gain support from the results. Significant relationships observed on the main effects, according to Frazier et al. (2004), are considered to be preferable in testing interaction effects. Table 4 also shows that the moderator variable, managerial attitude, has a strong positive direct relationship with export commitment ($p < .01$), suggesting that it could be a quasi moderator, rather than a pure moderator (Sharma, Durand, and Gur-Arie 1981). The other moderating variable, perceived market uncertainty, has no direct effect.

In testing H2a and H2b, Table 5 shows that the interaction term of managerial attitude and past export performance has no significant relationship with the dependent variable (model 3: $b = -0.117$, $p > .10$). This lends no support for H2a. However, the interaction of managerial attitude and negative performance effect appears to be associated with a significant, though weak, coefficient (model 3: $b = 0.123$, $p < .10$). Interpretation of this result indicates that managerial attitude reduces the negative relationship between the “negative effect on export performance” on “export commitment,” meaning that the negative impact is lessened by a positive managerial attitude. Thus, there is weak support for H2b.

With regard to H3a and H3b, Table 5 shows that the interaction term of perceived market uncertainty and past export performance is associated with a moderate significant negative coefficient (model 6: $b = -0.410$, $b < .05$). This lends support for H3a. However, there appears to be no moderation effect of perceived market uncertainty on the relationship between the negative performance effect and firms' export commitment. H3b, therefore, is not supported.

To facilitate our understanding of the effects of the two moderators, managerial attitude and perceived market uncertainty, we graphed the interaction effects based on models 3 and 6 in

Figure 2
Moderating Effect of Managerial Attitude on the Relationship between Negative Performance Effect of the Crisis and Export Commitment

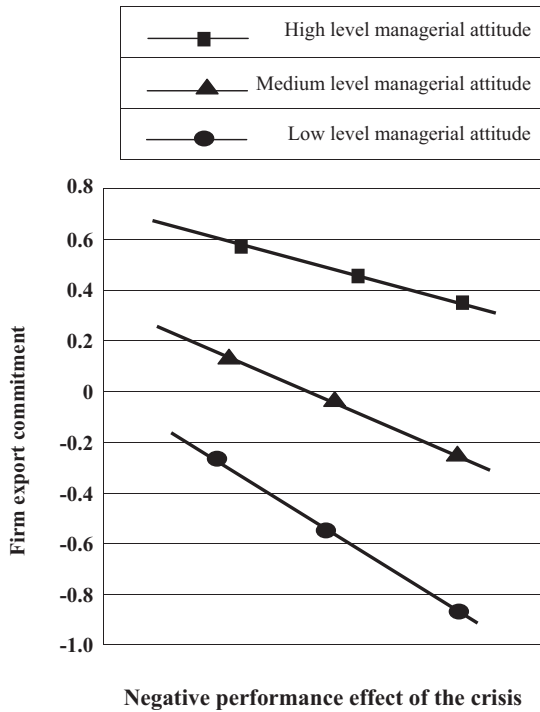
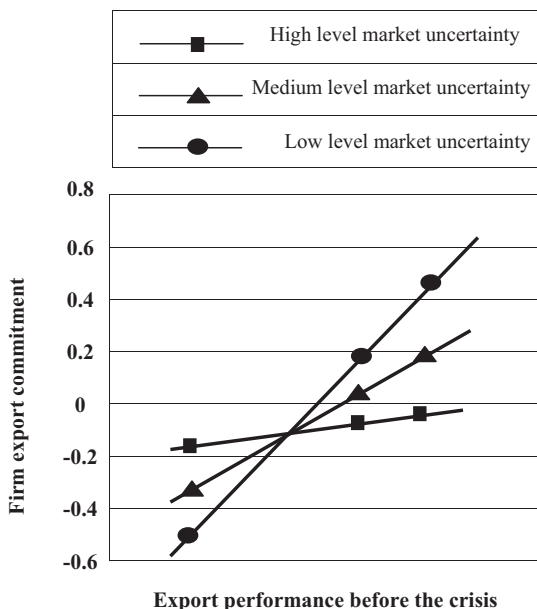


Table 5, respectively, using ModGraph (<http://pavlov.psyc.vuw.ac.nz/paul-jose/modgraph/modgraph.php>). The interactions of negative performance effect and managerial attitude are shown in Figure 2; the interactions of past export performance and perceived market uncertainty are shown in Figure 3. It can be seen that the degree to which the independent variable and the dependent variable are related varies with the moderation effects.

Discussion

An increasing number of studies have examined the impact of the global financial crisis on various aspects of firm behavior and performance, as well as the effectiveness of firm-level strategies during an economic crisis (Lee and Makhija 2009). However, few have so far exam-

Figure 3
Moderating Effect of Perceived Market Uncertainty on the Relationship between Past Export Performance (Export Performance before the Crisis) and Export Commitment



ined in detail the impacts of the crisis on exporting firms and, in particular, the flow-on effects of resulting changes in performance on firms' commitment to exporting. Our study addresses this research gap by drawing on both the behavioral theory of the firm and the export literature; it is also informed by research on crisis management.

With respect to the overall contributions of the study, we extend the basic tenets of behavioral theory of the firm to the context of export performance and strategy. By examining the implications of the financial crisis in the context of both pre and postcrisis export performance, we contribute both to the export literature and the crisis management literature, as little work has been done on the impact of the crisis on exporting at the firm level. Further, behavioral theory has long recognized the important role played by managerial cognition in the strategic decision-making and organizational learning

process (March and Olsen 1975). More recently, scholars in export research have highlighted the need for the role of moderators to be examined in export performance–strategy research; they particularly note the importance of cognitive factors as moderators, as well as the roles of cognition and behavior in this area of research (Eshghi 1992; Shinkle 2011; Stump et al. 1998). We respond to this call for further research by investigating the moderating effects of two cognitive variables—managerial attitude and managers' perceived market uncertainty—on the relationships between pre and postcrisis export performance and firm-level export commitment.

Given the theoretical and conceptual domains to which we believe our study contributes, we now discuss the findings in more detail. First, the direct effects of performance considerations on export commitment shown in our study suggest that a firm's performance offers a foundation for modifying its strategies for subsequent stages of its development. This accords with the behavioral theory of the firm and endorses previous export research that puts forwards a positive relationship between export performance and export commitment. However, by differentiating performance before and after the time of the financial crisis, we find that these two performance outcomes can induce potentially two competing influences on firms' export commitment—the former (precrisis performance) having a positive influence and the latter (postcrisis performance) having a negative influence. This demonstrates the importance of using a research approach that accommodates the unique situation of the crisis and recession while applying the performance–strategy rationale to firms. In accordance with others (Greve 2010; Lages et al. 2008), our findings challenge the view of performance as a static measure on a “low” to “high” continuum; rather, they support the perspective of performance as a dimension reflecting potential or actual change. We argue that a static approach may be appropriate for a stable environment, but it is unsuitable for complex situations, like a financial crisis, where many firms experience “performance disruptions.” This view is, indeed, grounded in behavioral theory, whereby, “the firm is seen not as a static entity, but as a system of slack, search, and rules that changes over time in response to experience, with experience interpreted in terms of the relation between performance and aspirations” (Augier 2013, p. 79).

The study also adds insight to the crisis management literature. Previous research has generally focused on firms' reactions to the immediate impact caused by a crisis. For instance, it is noted that the more firms are affected, the more likely they are to undertake actions in response to the changing economic environment (Churchill and Lewis 1984). Our findings, however, suggest that firms in a crisis tend to evaluate the effectiveness of their strategies holistically, by looking at the performance before and after the crisis, rather than being concerned only with the immediate effects of the crisis. In practice, this approach can help firms assess their responses with regard to a particular strategic direction. This corresponds with Latham's (2009) conclusion that, when deciding on a strategic response to a crisis, firms might weigh the short-term risk of investing in the strategy against the long-term consequence of not investing. For the focal firms in our study, retaining a high level of strategic commitment to exporting may not generate an immediate positive outcome, as signaled by the negative effects they encountered. Yet their previous success in exporting could imply a long-term return, if the firms maintain or increase their commitment to their export strategy. In accordance with the concept of organizational slack (Cyert and March 1963), and as Lee and Makhija (2009) discovered, firms with more export-related investments usually have a high level of strategic flexibility, which enables them to adapt to an economic crisis more effectively and achieve good performance subsequently.

A further contribution relates to the two cognitive managerial-level moderation effects on the relationships between performance and export commitment. Though our findings on these moderators are not totally in line with the hypotheses, they reveal how managerial attitudes and perceptions can play a role in the decision-making process and influence firm-level practices in a crisis situation. As already noted, they provide insights into the cognitive aspect of the behavioral theory of the firm, which has tended to be neglected in explanations of export performance and behavior (Shinkle 2011). Our study shows the importance of taking into account both cognitive and behavioral factors while predicting performance implications on strategy.

The lack of support for H2a indicates that the positive relationship between past

export performance and export commitment occurring in a relatively stable environment (precrisis) is not influenced by managerial attitude. However, when export performance is negatively affected by the financial crisis, this impact appears to be reduced by a positive managerial attitude (H2b), as illustrated in Figure 2. Drawing on behavioral theory to help explain this result, we argue that a positive managerial attitude promotes the search for new opportunities by firms to alleviate the negative impacts of the financial crisis, signaling an ongoing or increased commitment to exporting. In interpreting the results for managerial attitude, however, we note the potential for endogeneity effects, as other factors may influence its effect on export performance and export commitment. We discuss this later as a limitation in our study.

For the second moderator, perceived market uncertainty, a negative moderation effect was found on the past performance-export commitment relationship ($p < .05$). As illustrated in Figure 3, when managers perceive high market uncertainty, the positive influence of past performance on export commitment is reduced. This finding could offer complementary insights into previous research, which has mainly investigated the direct influence of this variable on firms' export strategies (Martin-Tapia et al. 2008). The finding is consistent with behavioral theory, which suggests that perceptions of uncertainty result in lower risk-taking behavior in decision-making (Kieser et al. 2001). Moreover, in considering why perceived uncertainty shows no moderating effect between the negative performance effect of the crisis and firm commitment to exporting, we look to the recent literature for more insight. A plausible explanation is that what matters and influences firms' actions in an uncertain environment is not only how much managers perceive the uncertainty but also how they are able to absorb the uncertainty, and have the confidence and capability to manage it (Butler, Doktor, and Lins 2010).

Despite not our primary focus, it is interesting to note that the control variables had no explanatory power in any of the models since factors such as firm size and international diversification are often associated with export firms' strategic decisions (Cavusgil and Zou 1994). We are unable to fully explain this finding. One possibility is that even though our sample was heterogeneous, the ranges within these control variables were not high, so there were no

detectable influences. We also checked if the control variables are related to any individual items for export commitment. We found only a weak negative relationship ($p < .10$) between the export commitment item “considering new export markets to enter” and foreign ownership. By itself, this result does not cast much light on the overall finding that control variables had no explanatory power in the model.

In sum, our study shows that export performance achieved prior to the financial crisis, and the negative effect on export performance resulting from the crisis, jointly predict firms’ commitment to exporting during the subsequent period. In understanding this performance–strategy relationship, the effects of cognitive factors, such as managerial attitudes toward exporting and perceptions about market uncertainty, must also be taken into account.

Limitations

The study has several limitations, which also lead to suggestions for further research. Two limitations relate to the data sample. First, despite a relatively high initial response rate, we gained access to only 65 useable responses. According to Mullen et al. (2009), this small sample limitation is not uncommon for research on small businesses, especially when studying small populations, like the New Zealand wine industry. To deal with this limitation, we followed Mullen et al.’s recommendation, making sure that we identified suitable firms to participate in the survey, and conducted a test for nonresponse bias. We also adapted our data analysis by testing the two moderators separately to accommodate this limitation. This is not ideal but workable in the context of our study. Second, all firms in the sample were active at the time of the research, meaning that they had survived thus far. This leads to potential survivorship bias, a limitation difficult to avoid (Latham 2009). Yet the study does offer valuable insight into how these survivors determined their commitment to exporting subsequent to the financial crisis.

Another limitation stems from the perceptual data used in the survey. As noted earlier, we did not use objective measure for export performance due to a concern about low response rate. Yet in developing and administrating the survey, we paid attention to concerns such as

construct reliability and validity by carefully adapting the existing measures from previous studies. We also confirmed that there was no threat posed by common method variance. In addition, we find support for using perceptual measures for firm performance in the literature, as already noted. For example, Dess and Robinson (1984, p. 271) suggest that perceptual measures could be used when at least two aspects of organizational performance are measured, and when the following specific conditions are met, “(1) accurate objective measures are unavailable, and (2) the alternative is to remove the consideration of performance from the research design.” We are able to meet these conditions in our study, and suggest that the use of perceptual measures in our study is acceptable—although acknowledge this as a limitation. We propose that, in order to better test the hypotheses, the use of objective data, especially longitudinal data for export performance (which would also overcome potential retrospective bias), as well as more fine-grained measures, would be preferable.

We also recognize that some of our variables may suffer from an endogeneity problem, in particular managerial attitude, since unobserved variables may drive it to be associated with export performance and/or export commitment. Endogeneity issues are particularly difficult to avoid in studies of strategic choice and performance (Shaver 1998). We were unable to apply appropriate remedies for this in our study, and consequently, our findings regarding managerial attitude should be interpreted cautiously.

Further, we examined two moderating variables to gain a better understanding of the influence of cognitive factors on the performance–strategy relationship within the context of our study. However, we are aware of other variables that may also influence or complicate firms’ decision-making in this context. For instance, as our data suggest, exporters might use a portfolio approach (e.g., enhancing its focus on one country while decreasing it in another) or pursue different entry modes; similarly, they may change their emphasis on either high- or low-end markets. The wine industry in New Zealand did experience an overall shift in focus from high-value bottled wine to bulk wines during the postcrisis period, as international markets became more price sensitive; this was reflected in increased volumes but lower profitability. These factors reflect more subtle

responses of firms to crisis situation, which clearly lend themselves to further research.

In addition, we acknowledge that, like many other studies adopting behavioral theory approaches to performance–strategy research questions, we did not measure aspirations relating to past performance, as researchers note difficulty in accurately measuring this construct (Shinkle 2011). We recommend further research in this area to better elucidate the explicit role of firm aspirations in strategic responses to past performance in the setting of exporter behaviors following a financial crisis.

Finally, our findings should be interpreted only within the relatively short timeframe in which firms responded to the financial crisis. It is likely that the impact of the crisis will diminish over time, as firms embark on a range of recovery processes. The longer-term impacts of the crisis will be a fruitful avenue for future export-oriented research.

Conclusions

Our study takes a step further than the existing literature in explaining why firms change their strategies in response to a global financial crisis, and the influences that impact on these decisions. In particular, we examine performance both before and after the financial crisis to better elucidate how firms respond to these two categories of performance feedback over time. We investigate the effects of this feedback on firms' decisions relating to their commitment to exporting and find moderating roles of two cognitive variables, managerial attitude and perceptions of market uncertainty, on the decision-making process—although not across both performance–commitment relationships. Though we expected managerial cognition to play an important role in this process, given the context of the global financial crisis, our findings lead to further research questions.

The comprehensiveness of firms' decision-making process (Forbes 2007) justifies more attention from practitioners and scholars, especially in the situation of a crisis (Latham 2009). As our study shows, different performance outcomes can drive different strategic responses, and the range of managerial variables involved in the decision-making process could be a reason for the heterogeneity seen in firms' behaviors in a financial crisis.

Overall, our study implies that in order to make appropriate strategic change in the situation of crisis, it is critical for firms to consider

the influence of performance both before and after the crisis. Meanwhile, managers should be aware of the role played by their own cognitions in the strategic decision-making process. Finally, though focused on the New Zealand wine industry, our study has relevance across a wider sphere. First, relatively little research has been conducted on the responses of exporting SMEs in the context of a global financial crisis, let alone the decision-making process and influencing factors, as already noted. We believe that our study can contribute to addressing similar issues faced by SMEs in other industries and in small developed economies, like New Zealand. The importance of exporting to most of these economies highlights the need for a better understanding of how exporting firms may respond to external shocks, such as a global financial crisis. Second, there is a growing body of literature on SME wine exporters, which is important, given the somewhat idiosyncratic nature of this industry. Though the single industry focus may be a limitation of our own study, we believe that our findings will have direct relevance to this community of researchers, as well as more broadly, as just outlined.

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References

- Agrawal, N., and D. Maheswaran (2005). "Motivated Reasoning in Outcome-Bias Effects," *Journal of Consumer Research* 31(4), 798–805.
- Alessandri, T. M. (2008). "Risk and Procedural Rationality: A Behavioural Theory Perspective," *Journal of Strategy and Management* 1(2), 198–217.
- Argote, L., and H. R. Greve (2007). "A Behavioral Theory of the Firm—40 Years and Counting: Introduction and Impact," *Organization Science* 18(3), 337–349.
- Armario, J. M., D. M. Ruiz, and E. M. Armario (2008). "Market Orientation and Internationalisation in Small and Medium-sized

- enterprises," *Journal of Small Business Management* 46(4), 485–511.
- Armstrong, J. S., and T. S. Overton (1977). "Estimating Nonresponse Bias in Mail Surveys," *Journal of Marketing Research* 14(3), 396–402.
- Audia, P., and H. R. Greve (2006). "Less Likely to Fail: Low Performance, Firm Size, and Factory Expansion in the Shipbuilding Industry," *Management Science* 52(1), 85–94.
- Augier, M. (2004). "Marching towards 'a Behavioural Theory of the Firm'," *Management Decision* 42(10), 1257–1268.
- (2013). "The Early Evolution of the Foundations for Behavioral Organization Theory and Strategy," *European Management Journal* 31(1), 72–81.
- Bao, Y., B. Olson, and W. Yuan (2011). "Defensive and Expansion Responses to Environmental Shocks in China: Interpreting the 2008 Economic Crisis," *Thunderbird International Business Review* 53(2), 225–245.
- Baron, R. M., and D. A. Kenny (1986). "The Moderator-mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations," *Journal of Personality and Social Psychology* 51(5), 1173–1182.
- Beleska-Spasova, E., and K. W. Glaister (2010). "Geographic Orientation and Performance," *Management International Review* 50(5), 533–557.
- (2011). "The Role of Firms-specific Advantages in UK Export Initiation," *The Multinational Business Review* 19(2), 168–194.
- Bello, D. C., and H. C. Barksdale (1986). "Exporting at Industrial Trade Shows," *Industrial Marketing Management* 15(3), 197–206.
- Benito, G. R., B. Petersen, and L. S. Welch (2009). "Towards More Realistic Conceptualisations of Foreign Operation Modes," *Journal of International Business Studies* 40(9), 1455–1470.
- Bilkey, W. J. (1978). "An Attempted Integration of the Literature on the Export Behaviour of Firms," *Journal of International Business Studies* 9(1), 33–46.
- Bonaccorsi, A. (1992). "On the Relationship Between Firm Size and Export Intensity," *Journal of International Business Studies* 23(4), 605–635.
- Brouthers, K. D., and J. Hennart (2007). "Boundaries of the Firm: Insights from International Entry Mode Research," *Journal of Management* 33(3), 395–425.
- Bruning, E. R. (1995). "Strategic Positioning for Export Market Development: the Role of Managerial Attitudes, Export Development Programmes and Firm Characteristics," *Journal of Strategic Marketing* 3(2), 127–143.
- Buckley, P. J., T. M. Devinney, and J. J. Louviere (2007). "Do Managers Behave the Way Theory Suggests? A Choice-theoretic Examination of Foreign Direct Investment Location Decision-making," *Journal of International Business Studies* 38(7), 1069–1094.
- Butler, J. E., R. Doktor, and F. A. Lins (2010). "Linking International Entrepreneurship to Uncertainty, Opportunity Discovery, and Cognition," *Journal of International Entrepreneurship* 8(2), 121–134.
- Calof, J. L. (1994). "The Relationship between Firm Size and Export Behaviour Revisited," *Journal of International Business Studies* 25(2), 367–387.
- Calof, J. L., and P. W. Beamish (1995). "Adapting to Foreign Markets: Explaining Internationalisation," *International Business Review* 4(2), 115–131.
- Cavusgil, T., and J. Nevin (1981). "International Determinants of Export Marketing Behaviour: An Empirical Investigation," *Journal of Marketing Research* 18(1), 114–119.
- Cavusgil, T., and S. Zou (1994). "Marketing Strategy—Performance Relationship: An Investigation of the Empirical Link in Export Market Ventures," *Journal of Marketing* 58(1), 1–21.
- Chattopadhyay, P., W. H. Glick, and G. P. Huber (2001). "Organisational Actions in Response to Threats and Opportunities," *Academy of Management Journal* 44(5), 937–955.
- Child, J. (1972). "Organisational Structure, Environment and Performance: The Role of Strategic Choice," *Sociology* 6, 2–22.
- Chung, C. C., S. Lee, P. W. Beamish, and T. Isobe (2010). "Subsidiary Expansion/Contraction during Times of Economic Crisis," *Journal of International Business Studies* 41(3), 500–516.
- Churchill, N. C., and V. L. Lewis (1984). "Lessons for Small Business from the Recession," *Journal of Small Business Management* 22(2), 5–17.

- Clayton, G., and N. Stevens (2007). "False Idol' Economy: The New Zealand Wine Industry," *International Journal of Systems Applications, Engineering and Development* 3(1), 69–74.
- Cohen, M. D., J. G. March, and J. P. Olsen (1972). "A Garbage Can Model of Organizational Choice," *Administrative Science Quarterly* 17(1), 1–25.
- Coviello, N. E., and A. McAuley (1999). "Internationalisation and the Smaller Firm: A Review of Contemporary Empirical Research," *Management International Review* 39(3), 223–256.
- Cyert, R. M., and J. G. March (1963). *A Behavioural Theory of the Firm*. Englewood Cliffs, NJ: Prentice Hall.
- Deloitte (2010). New Zealand Wine Industry Benchmarking Survey 2009, <http://interest.co.nz/>.
- Deloitte (2011). New Zealand Wine Industry Benchmarking Survey 2011, <http://www.deloitte.com/>.
- (2012). Vintage 2012 New Zealand Wine Industry Benchmarking Survey, <http://www.deloitte.com/>.
- Deng, S. D. M., J. A. Duffy, and R. Harrison (1995). "Internationalization in Small, Commodity Based Economies: The New Zealand Example," *Asia Pacific Journal of Marketing and Logistics* 7(1/2), 37–61.
- Dess, G., and R. Robinson (1984). "Measuring Organizational Performance in the Absence of Objective Measures: The Case of The Privately-held Firm and Conglomerate Business Unit," *Strategic Management Journal* 5, 265–273.
- Dichtl, E., H. Koeglmayr, and S. Mueller (1990). "International Orientation as a Precondition for Export Success," *Journal of International Business Studies* 21(1), 23–40.
- Eisenhardt, K. M., and M. J. Zbaracki (1992). "Strategic Decision Making," *Strategic Management Journal* 13, 17–37.
- Eshghi, A. (1992). "Attitude-behaviour Inconsistency in Exporting," *International Marketing Review* 9(3), 40–61.
- Fairfax Media (2012). "Economy's Growth Hit Revealed." Available at <http://www.stuff.co.nz/business/industries/8104408/Economys-growth-hit-revealed>, accessed March 10, 2015.
- Fiengenbaum, A., S. Hart, and D. Schendel (1996). "Strategic Reference Point Theory," *Strategic Management Journal* 17, 219–235.
- Field, A. (2009). *Discovering Statistics Using SPSS*. London: Sage Publications.
- Filatotchev, I., X. Liu, T. Buck, and M. Wright (2009). "The Export Orientation and Export Performance of High-technology SMEs in Emerging Markets: the Effects of Knowledge Transfer by Returnee Entrepreneurs," *Journal of International Business Studies* 40(6), 1005–1021.
- Forbes, D. P. (2007). "Reconsidering the Strategic Implications of Decision Comprehensiveness," *Academy of Management Review* 32(2), 361–376.
- Francis, J., and C. Collins-Dodd (2000). "The Impact of Firms' Export Orientation on the Export Performance of High-tech Small and Medium-sized Enterprises," *Journal of International Marketing* 8(3), 84–103.
- Frazier, P. A., A. P. Tix, and K. E. Baroon (2004). "Testing Moderator and Mediator Effects in Counselling Psychology Research," *Journal of Counselling Psychology* 51(1), 115–134.
- Gary, S. M., and R. E. Wood (2011). "Mental Models, Decision Rules, and Performance Heterogeneity," *Strategic Management Journal* 32, 569–594.
- Greenaway, D., R. Kneller, and X. Zhang (2010). "Exchange Rate Uncertainty and Export Decisions in the UK," *Journal of Economic Integration* 25(4), 734–753.
- Greve, H. R. (2008). "A Behavioural Theory of Firm Growth: Sequential Attention to Size and Performance Goals," *Academy of Management Journal* 51(3), 476–494.
- (2010). "Positional Rigidity: Low Performance and Resource Acquisition in Large and Small Firms," *Strategic Management Journal* 32(1), 103–114.
- Grigg, J. (2011). "Wine Crusaders Bow Out for Now." *The New Zealand Farmers Weekly*, Retrieved from <http://www.farmersweekly.co.nz/>.
- Grossman, R. S., and C. M. Meissner (2010). "International Aspects of the Great Depression and the Crisis of 2007: Similarities, Differences and Lessons," *Oxford Review of Economic Policy* 26(3), 318–338.
- Hamilton, B. H., and J. A. Nickerson (2003). "Correcting for Endogeneity in Strategic Management Research," *Strategic Organization* 1(1), 51–78.
- Harman, H. H. (1976). *Modern Factor Analysis*. Chicago IL: University of Chicago.

- Johanson, J., and J. Vahlne (2009). "The Uppsala Internationalisation Process Model Revisited: From Liability of Foreignness to Liability of Outsidership," *Journal of International Business Studies* 40(9), 1411–1431.
- Johnston, W. J., and M. R. Czinkota (1985). "Export Attitudes of Industrial Manufacturers," *Industrial Marketing Management* 14, 123–132.
- Judd, R. J., and C. H. Lee (1981). "Financial Concerns and Business Strategies during Inflation/Recession: Perceptions by Business Owners/Managers," *Journal of Small Business Management* 19(4), 42–49.
- Katsikeas, C. S. (1996). "Ongoing Export Motivation: Differences between Regular and Sporadic Exporters," *International Marketing Review* 13(2), 4–19.
- Kedia, B. L., and J. Chhokar (1985). "The Impact of Managerial Attitudes on Export Behaviour," *American Journal of Small Business* 10(2), 7–17.
- Kellermanns, F. W., J. Walter, C. Lechner, and S. W. Floyd (2005). "The Lack of Consensus about Strategic Consensus: Advancing Theory and Research," *Journal of Management* 31, 719–737.
- Ketchen, D. J., and T. B. Palmer (1999). "Strategic Responses to Poor Organisational Performance: A Test of Competing Theories," *Journal of Management* 25(5), 683–706.
- Ketokivi, M. A., and R. G. Schroeder (2004). "Perceptual Measures of Performance: Fact or Fiction?," *Journal of Operations Management* 22(3), 247–264.
- Kieser, A., N. Beck, and R. Tainio (2001). "Rules and Organizational Learning: The Behavioral Theory Approach," Ch 27 in *Handbook of Organizational Learning and Knowledge*. Eds. M. Dierkes, A. B. Antal, J. Child, and I. Nonaka. New York, NY: Oxford University Press, 598–625.
- Kim, D. H. (1993). "The Link between Individual and Organizational Learning," *Sloan Management Review* 35(1), 37–50.
- Kunc, M., and R. Bhandari (2011). "Strategic Development Processes during Economic and Financial Crisis," *Management Decision* 49(8), 1343–1353.
- Kunda, Z. (1990). "The Case for Motivated Reasoning," *Psychological Bulletin* 108(3), 480–498.
- Lages, L. F., and D. B. Montgomery (2004). "Export Performance as an Antecedent of Export Commitment and Marketing Strategy Adaptation: Evidence from Small and Medium Sized Exporters," *European Journal of Marketing* 38(9/10), 1186–1214.
- Lages, L. F., S. D. Jap, and D. A. Griffith (2008). "The Role of Past Performance in Export Ventures: A Short-term Reactive Approach," *Journal of International Business Studies* 39(2), 304–325.
- Latham, S. (2009). "Contrasting Strategic Response to Economic Recession in Start-up versus Established Software Firms," *Journal of Small Business Management* 47(2), 180–201.
- Lee, S., and M. Makhija (2009). "Flexibility in Internationalisation: Is It Valuable During an Economic Crisis?," *Strategic Management Journal* 30, 537–555.
- Lee, S., M. Makhija, and Y. Paik (2008). "The Value of Real Options Investments under Abnormal Uncertainty: The Case of the Korean Economic Crisis," *Journal of World Business* 43, 16–34.
- Lee, S., P. W. Beamish, H.-K. Lee, and J.-H. Park (2009). "Strategic Choice during Economic Crisis: Domestic Market Position, Organizational Capabilities and Export Flexibility," *Journal of World Business* 44, 1–15.
- Leonidou, L. C., C. S. Katsikeas, and N. F. Piercy (1998). "Identifying Managerial Influences on Exporting: Past Research and Future Directions," *Journal of International Marketing* 6(2), 74–102.
- Leonidou, L. C., C. S. Katsikeas, and S. Samiee (2002). "Marketing Strategy Determinants of Export Performance: A Meta-analysis," *Journal of Business Research* 55(1), 51–67.
- Levinthal, D., and J. G. March (1981). "A Model of Adaptive Organizational Search," *Journal of Economic Behavior and Organization* 2, 307–333.
- Lopez-Gamero, M. D., J. F. Molina-Azorin, and E. Claver-Cortes (2011). "Environmental Uncertainty and Environment Management Perception: A Multiple Case Study," *Journal of Business Research* 64(5), 427–435.
- Lovas, B., and S. Ghoshal (2000). "Strategy as Guided Evolution," *Strategic Management Journal* 21, 875–896.
- Lu, Y., L. Zhou, G. Bruton, and W. Li (2010). "Capabilities as a Mediator Linking Resources and the International Performance of Entrepreneurial Firms in an

- Emerging Economy,” *Journal of International Business Studies* 41(3), 419–436.
- Luckas, B. A., G. J. Whitwell, and P. Hill (2007). “Export Planning Orientation and Its Antecedents: Evidence from Exporting IT Products,” *Journal of Business Research* 60(12), 1282–1289.
- March, J. G., and J. P. Olsen (1975). “The Uncertainty of the Past: Organizational learning under Ambiguity,” *European Journal of Political Research* 3, 147–171.
- Martin-Tapia, I., J. Aragon-Correa, and M. E. Senise-Barrio (2008). “Being Green and Export Intensity of SMEs: The Moderating Influence of Perceived Uncertainty,” *Ecological Economics* 68(1), 56–67.
- Massini, S., A. Y. Lewin, and H. R. Greve (2005). “Innovations and Imitators: Organisational Reference Groups and Adoption of Organisational Routines,” *Research Policy* 34, 1550–1569.
- McGee, J. E., and O. O. Sawyer (2003). “Uncertainty and Information Search Activities: A Study of Owner-managers of Small High-technology Manufacturing firms,” *Journal of Small Business Management* 41(4), 385–401.
- Milliken, F. J. (1987). “Three Types of Perceived Uncertainty about the Environment: State, Effect and Response Uncertainty,” *Academy of Management Review* 12(1), 133–143.
- Ministry of Business, Innovation & Employment (2013). “Small Business in New Zealand.” <http://www.med.govt.nz/business/business-growth-internationalisation/pdf-docs-library/small-and-medium-sized-enterprises/2013-stats-factsheet.pdf>, accessed March 10, 2015.
- Mitroff, I. I., P. Shrivastava, and F. E. Udvardi (1987). “Effective Crisis Management,” *Academy of Management Perspective* 1(4), 283–292.
- Moini, A. H. (1991). “Export Behaviour of Small Firms: The Impact of Managerial Attitudes,” *The International Executive* 33(2), 14–20.
- Morgan, R. E. (1997). “Export Stimuli and Export Barriers: Evidence from Empirical Research Studies,” *European Business Review* 97(2), 68–79.
- Mullen, M. R., D. G. Budeva, and P. M. Doney (2009). “Research Methods in the Leading Small Business-Entrepreneurship Journals: A Critical Review with Recommendations for Future Research,” *Journal of Small Business Management* 47(3), 287–307.
- Murray, J. Y., G. Y. Gao, and M. Kotabe (2011). “Market Orientation and Performance of Export Ventures: The Process through Marketing Capabilities and Competitive Advantages,” *Journal of the Academy of Marketing Science* 39(2), 252–269.
- National Bureau of Economic Research (2013). “The Great Recession: A Self-Fulfilling Global Panic.” <http://www.nber.org/papers/w19062>, accessed March 10, 2015.
- Navarro, A., F. J. Acedo, F. Losada, and E. Ruzo (2011). “Integrated Model of Export Activity: Analysis of Heterogeneity in Managers’ Orientations and Perceptions on Strategic Marketing Management in Foreign Markets,” *Journal of Marketing Theory and Practice* 19(2), 187–204.
- Nelson, R. R., and S. G. Winter (1982). *An Evolutionary Theory of Economic Change*. Cambridge, MA: Belknap Press.
- NZ Wine Annual Report (2012). http://www.nzwine.com/assets/sm/. . . /nzw_annual_report_2012_web1.pdf.
- NZIER report to NZ winegrowers (2009). Economic Impact of the New Zealand Wine Industry, Available at <http://www.nzwine.com> (accessed 5th January 2011).
- Park, A., D. Yang, X. Shi, and Y. Jiang (2010). “Exporting and Firm Performance: Chinese Exporters and the Asian Financial Crisis,” *The Review of Economics and Statistics* 92(4), 822–842.
- Pearson, C. M., and J. A. Clair (1998). “Reframing Crisis Management,” *Academy of Management Review* 23(1), 59–76.
- Podsakoff, P. M., S. B. MacKenzie, J. Y. Lee, and N. P. Podsakoff (2003). “Common Method Biases in Behavioural Research: A Critical Review of the Literature and Recommended Remedies,” *Journal of Applied Psychology* 88(5), 879–903.
- Prebel, J. F. (1997). “Integrating the Crisis Management Perspective into the Strategic Management Process,” *Journal of Management Studies* 34(5), 769–791.
- Qian, C., Q. Cao, and R. Takeuchi (2013). “Top Management Team Functional Diversity and Organisational Innovation in China: The Moderating Effects of Environment,” *Strategic Management Journal* 34(1), 110–143.
- Racela, O. C., C. Chaikittisilpa, and A. Thoumrunroje (2007). “Market Orientation, International Business Relationships and Perceived Export Performance,” *International Marketing Review* 24(2), 144–163.

- Reid, S. D. (1983). "Managerial and Firm Influences on Export Behavior," *Journal of the Academy of Marketing Science* 2(3), 323–332.
- Rose, G. M., and A. Shoham (2002). "Export Performance and Market Orientation: Establishing an Empirical Link," *Journal of Business Research* 55(3), 217–225.
- Sharma, S., R. M. Durand, and O. Gur-Arie (1981). "Identification and Analysis of Moderator Variables," *Journal of Marketing Research* 18, 291–300.
- Shaver, J. M. (1998). "Accounting for Endogeneity When Assessing Strategy Performance: Does Entry Mode Choice Affect FDI Survival?," *Management Science* 44(4), 571–585.
- Shimizu, K., and M. A. Hitt (2004). "Strategic Flexibility: Organisational Preparedness to Reverse Ineffective Strategic Decisions," *Academy of Management Executive* 18(4), 44–59.
- Shinkle, G. A. (2011). "Organizational Aspirations, Reference Points, and Goals: Building on the Past and Aiming for the Future," *Journal of Management* 38(1), 415–455.
- Shoham, A. (1998). "Export Performance: A Conceptualisation and Empirical Assessment," *Journal of International Marketing* 6(3), 59–81.
- Sitkin, S. B., and A. L. Pablo (1992). "Reconceptualising the Determinants of Risk Behaviour," *Academy of Management Review* 17(1), 9–38.
- Staw, B. M., L. E. Sandelands, and J. E. Dutton (1981). "Threat-rigidity Effects in Organisational Behaviour: A Multilevel Analysis," *Administrative Science Quarterly* 26, 501–524.
- Stump, R. L., G. A. Athaide, and C. N. Axinn (1998). "The Contingent Effect of the Dimensions of Export Commitment on Exporting Financial Performance: An Empirical Examination," *Journal of Global Marketing* 12(1), 7–24.
- Sutcliffe, C. M., and G. P. Huber (1998). "Firm and Industry as Determinants of Executive Perceptions of the Environment," *Strategic Management Journal* 19(8), 793–807.
- Thaler, R. (2000). "Towards a Positive Theory of Consumer Choice," in *Choices, Values and Frames*. Eds. D. Kahneman and A. Tversky. Cambridge: Cambridge University Press, 267–287.
- The Treasury, New Zealand (2010). "Special Topic: Recession and Recovery" *Monthly Economic Indicator*, January.
- UNCTAD (2009). *Assessing the Impact of the Current Financial and Economic Crisis on Global FDI Flows*.
- Venkatraman, N., and V. Ramanujam (1986). "Measurement of Business Performance in Strategic Research: A Comparison of Approaches," *Academy of Management Review* 11(4), 801–814.
- Vissa, B., H. R. Greve, and W. R. Chen (2010). "Business Group Affiliation and Firm Search Behavior in India: Responsiveness and Focus of Attention," *Organization Science* 21, 696–712.
- Weick, K. E. (1988). "Enacted Sensemaking in Crisis Situations," *Journal of Management Studies* 25(4), 305–317.
- Wines of NZ (2012). <http://www.winesofnz.com/> (accessed on February 12, 2013).
- Winter, S. G., G. Cattani, and A. Dorsch (2007). "The Value of Moderate Obsession: Insights from a New Model of Organizational Search," *Organization Science* 18(3), 403–419.



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