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INVITED PAPER
Founding team experience, industry context, and new venture creation

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Abstract
Purpose – The purpose of this paper is to examine the role of founding team experience (industry and venturing) in new venture creation. This paper posits the following questions: How does founding team experience influence the likelihood of new venture creation, in the nascent stage? How does industry context moderate this relationship? The study aims to fill an important gap in the literature by unpacking the impact of different types of founding team experiences on venture outcome, and by focusing on the influence of founding team in the venture creation process, specifically at the nascent stage.

Design/methodology/approach – The paper utilizes data from the Second Panel Study of Entrepreneurial Dynamics, a longitudinal data set of 1,214 nascent entrepreneurs in the USA. Logistics regression was employed to analyze the effect of founding team experience on new venture creation. Post hoc analysis was conducted to ensure the confidence of the findings.

Findings – The paper provides empirical insights about how founding team experience influences the likelihood of new venture creation in the nascent stage. At the nascent stage, founding team industry experience positively affects new venture creation while founding team venturing experience does not. However, in the high-technology industry environment, the influence of the founding team’s venturing experience on new venture creation is stronger than that in the low-technology industry environment.

Research limitations/implications – Due to the design of the data set, there is a risk of “right-censoring” problem. Also, because the study used archival data on founding teams, the methodology did not allow for uncovering the underlying team processes and dynamics during the venture creation process based on learning from experience. Future studies are encouraged to examine other types of founding team experience and the underlying process-level factors on venture creation.

Practical implications – The paper provides important practical implications for nascent entrepreneurs/entrepreneurial teams on team assembling and composition. In general, a team with higher-level industry experience is critical for venturing success. A team with higher-level venturing experience is more desired in the high-technology industry.

Originality/value – This paper fulfills an important gap in the entrepreneurial team literature by highlighting the complex and nuanced ways in which founding team experience influences the likelihood of venture creation in the nascent stage of the firm, especially after incorporating the additional impact of the industry context.

Keywords Founding team experience, Nascent stage, New venture creation

Paper type Research paper

Introduction
Creating a new business requires significant knowledge about an emerging opportunity, market, product/service and associated organizational processes, all of which rarely reside in one person. Therefore, even though solo entrepreneurship is always appreciated, the idea of the entrepreneur as the “lonely hero” (Chowdhury, 2005) is increasingly being replaced by
the notion of an entrepreneurial founding team. In the past two decades, considerable research has been conducted on entrepreneurial teams (also referred to as founding teams or new venture teams) (see Klotz et al., 2014 for a review). Scholars have examined a variety of founding team characteristics and their influence on new venture performance and/or other firm outcomes, such as founding team composition (Jin et al., 2017), team demographic diversities (Chowdhury, 2005), team social interactions (Lechler, 2001), team personalities (Zhou et al., 2015) and so on. However, the extant research has largely tended to focus on the impact of founding teams on outcomes for a venture already created. In contrast, research on the likely impact of founding teams on venture creation is still at its infancy (Muñoz-Bullon et al., 2015):

RQ1. How does founding team experience influence the likelihood of new venture creation, in the nascent stage?

RQ2. Are there other contingencies that affect this relationship?

These are the two main research questions guiding this study. Specifically, the study examines two types of founding team experience: industry and venturing experiences, and their effects on the likelihood of venture creation, after taking into account the industry context. New venture creation is a non-routine, risky and complex process, which requires founders to engage in a range of processes: scanning the environment, selecting opportunities and formulating strategies to take advantages of these opportunities (Chandler and Hanks, 1994). For ventures that are team driven, the process should benefit from team-based experiences (Delmar and Shane, 2006; Muñoz-Bullon et al., 2015; Zheng, 2012). Yet, studies on how founding team experience influences the new venture creation process are sparse. The extant literature on founding team experience has tended to emphasize the team’s role and impact in a variety of venture outcomes, such as survival, growth, performance and other organizational/strategic outcomes (e.g. Beckman et al., 2007; Colombo and Grilli, 2005; Delmar and Shane, 2006; Fern et al., 2012; Zheng et al., 2016). In spite of an early and definitive call about two decades ago for more research on the role of founding teams in venture creation (Kamm et al., 1990), limited attention has been paid on this topic. This study attempts to fill this important gap.

Furthermore, entrepreneurial scholars have long argued the importance of the actual context in researching the impact of entrepreneurs and/or entrepreneurial teams (e.g. Ensley et al., 2006; Hmieleski and Ensley, 2007; Lumpkin and Dess, 2001). It is conceivably that the likely impact of founding team experiences on venture creation may vary, depending on founding conditions. As such, the present study examines the moderating effect of one important founding condition, the industry context. The authors argue that the effect of founding team experience on venture creation may vary, depending on whether the industry context is high tech or low tech. Related to this is another fundamental question of this study: founding team often brings different forms of experiences to the venturing process (this study looks at two types: industry and venturing). Therefore, are these experiences similar in terms of their impact on the likelihood of venture creation? If not, under which circumstances, does one type of founding team experiences become more important than the other, during the venture creation process?

This paper makes several contributions. First, as already noted, previous studies have largely investigated new venture teams’ (often times the top management teams’ (TMTs)) impact on established ventures (e.g. Amason et al., 2006; Ensley and Hmieleski, 2005; Ensley et al., 2002; Hmieleski and Ensley, 2007; Zhao et al., 2013). In this regard, this study is especially salient in understanding how entrepreneurial team experiences affect the continuation or discontinuation of a venture gestation process leading to a firm formation. Second, most of the studies on entrepreneurial experiences have either looked at entrepreneurs’ or founding teams’ prior founding experience (Wright et al., 1998), or treated as a unified measure of work experience (e.g. Reuber and Fischer, 1999). This study unpacks
the different type of founding team experiences and further explores their interaction effects with the context the venture is placed in, thus offering a more fine-grained perspective on the impact of founding team experience on the likelihood of new venture creation.

Building upon the entrepreneurial cognition perspective (Mitchell et al., 2002) and the upper echelons theory (Hambrick and Mason, 1984), this study posits that the founding team industry and venturing experiences are beneficial to new venture creation. Additionally, the study suggests that the impact of founding team experiences on the likelihood of new venture creation will be stronger in a high-technology industry than that in a low-technology industry. Hypotheses were tested using a unique longitudinal data set of the Second Panel Study of Entrepreneurial Dynamics (PSED II) (Gartner and Shaver, 2012).

The paper is organized as follows. The first section reviews and discusses the literature on founding team experiences and new venture creation. The next section hypothesizes the independent effects of founding team experiences on new venture formation, as well as the moderating effects of industrial environment, followed by research methodology and results. Implications for practitioners and future research were presented at the end.

Theory and hypotheses development

Venture creation is a complex, non-routine process, which involves interaction among various agents (individuals, partners, groups, parent organizations, etc.) and the business environment. The process is characterized by four properties, namely, intentionality, resources, boundary and exchange (Katz and Gartner, 1988). Specifically, intention is referred to as the process of seeking information to achieve the goals of creating an organization; resources, for the process of resource acquisition and combination process to form an organization; boundary identification, for setting up tax system, legal forms; and finally exchange for activities within (i.e. human resource management) and across the organizational boundary (i.e. selling goods to customers, etc.). Therefore, for an emerging organization to be called as an established entity, the venture needs to be able to successfully demonstrate and integrate these activities. Among these activities, opportunity identification has been considered as one of the most essential part of this process. Essentially, entrepreneurial outcomes such as new venture creation, at least in part, happen based on the different capabilities of entrepreneurs to identify potentially profitable opportunities (Shane and Venkataraman, 2000; Shepherd and DeTienne, 2005).

This study draws insights from two theories of entrepreneurship to analyze the founding team experiences’ role in new venture creation. The first is the entrepreneurial cognition theory (Mitchell et al., 2002), and the other is the upper echelons theory (Hambrick and Mason, 1984). The entrepreneurial cognition perspective views new venture creation as a cognitive process in which founders/founding teams use their “knowledge structures […] to make assessments, judgments, or decisions involving opportunity evaluation, venture creation, and growth” (Mitchell et al., 2002, p. 97). The entrepreneurial cognitive perspective is especially suited to understanding the process of new venture creation because of two reasons: first, the process of forming a new venture involves high level of uncertainty, ambiguity and risks; and second, the impact of founders/founding team’s managerial cognitions is stronger in this process, than those of large, established firms (Forbes, 1999). According to this perspective, two key elements of entrepreneurial cognition: the entrepreneurs' knowledge structure (heuristical or scripted) and decision making (Mitchell et al., 2007) directly influence choices made by the founders/founding team during the venturing process. Entrepreneurs are found to be more likely to rely on their biases and heuristics in decision making (Busenitz and Barney, 1997). Indeed, entrepreneurship has been characterized as an “enactment” process where acting precedes systematic thinking (Gartner et al., 1992). Similarly, scholars argue
that mental heuristics ("shortcuts") and knowledge acquired from past experience are often used by entrepreneurs in their venturing process (Baron, 2008).

The upper echelons theory argues that the cognitive capacity of the TMT typically represents the dominant heuristics of the firm (Hambrick and Mason, 1984). Managers develop their heuristics from their career experiences (Hambrick and Mason, 1984). As Hambrick and Mason (1984, p. 200) suggested, "executives' career experiences partially shape the lenses through which they view current strategic opportunities and problems." Managers’ career experiences expose them to specific problems and situations. Managers may carry “imprints” from their past career experiences (Stinchcombe and March, 1965). Simplifying heuristics are developed from such experiences to allow managers to arrive at satisfying solutions with limited search (March and Simon, 1958; Simon, 1979). Compared to this managerial cognition, entrepreneurial cognition is more based upon entrepreneurs’ experiences and belief, as organizational structure and system are far from developed yet (Alvarez and Busenitz, 2001).

This study focuses on one important attribute of the founding team—their prior experiences. Founding team experience is usually taken to comprise the following categories: industry experience (or knowledge of the specific industry the venture is being launched in), venturing experience (or knowledge about creating and managing entrepreneurial new ventures) and managerial experience (or knowledge of managing businesses, in general) (West and Noel, 2009). This study considers two types of founding team experience (industry and venturing experience) and examines how they affect the likelihood of venture creation. With regard to managerial experience, there is a fair level of consensus that such general managerial experience does not contribute to the success of new ventures (Colombo and Grilli, 2005; Sandner et al., 2008) unless little industry-specific managerial knowledge is available in the industry where the venture is being created (Patzelt et al., 2008). As such, the present research focuses only on the impact of founding team industry and venturing experience.

**Founding team industry experience**

Entrepreneurship literature has long emphasized the role of founders' personal characteristics in influencing new venture creation, growth and performance (e.g. Chandler and Hanks, 1994; Colombo and Grilli, 2005; Cooper et al., 1994). As one important form of human capital (Becker, 1962), the founder’s work experience is presumed to have significant influence on both the creation and the performance of new ventures.

This study first examines one specific form of founding team prior work experience—their experiences with the industry in which the proposed new venture is going to compete in. Previous studies have mostly focused on founders’ startup or venturing experience (Wright et al., 1998). The authors think industry experience is critically important in the venturing process. From an entrepreneurial cognition perspective, founders are primed to identify those opportunities that reflect their prior industry experience (Shane and Venkataraman, 2000). In general, experience increases founders’ entrepreneurial alertness—an ability to detect opportunities which are overlooked by others (Kirzner, 1979) and such alertness often comes from a person’s prior knowledge and prior industry experience (Casson, 1987). Tang et al. (2012) found that entrepreneurs prior knowledge significantly increases three dimensions of entrepreneurial alertness: scanning and searching for new information, connecting previously disparate information and evaluating whether the new information represents an opportunity. Managers with industry experience in a high uncertain entrepreneurial environment are more able to identify and seize new opportunities (Kor, 2003). In a longitudinal study on academic spinoff ventures, Rasmussen et al. (2011) discovered that industry experience embedded in the entrepreneurial team allows the team to be able to frame and revise the scientific knowledge into a viable business opportunity.
Furthermore, scholars have found that founding teams with more diverse industry experience identify a larger number of, and in particular, more varied (distant) market opportunities (Gruber et al., 2012). It is expected that a founding team with more industry experience will be more able to detect new opportunities, which may have been overlooked by others.

When making strategic decisions in new ventures, an entrepreneur tends to draw on content knowledge that is readily accessible in his or her memory (Fern et al., 2012). Although it may be difficult to attribute nascent ventures to industry settings as they are still in the emerging stage, prior industry experience equips the team with better information which, in turn, reduces founders’ perceived risks (Norton and Moore, 2006) and lowers their expectations of liabilities of newness (Gimeno et al., 1997; Shane and Khurana, 2003). Industry experience provides knowledge and important information about the industry norms, rules and practices in the environment in which the new venture is going to operate. Founding team with more industry experience is able to understand customer better and knows how to serve them (Delmar and Shane, 2006). In the similar vein, industry information with regard to the interactions among suppliers, customers, regulators and the market enables the founding team necessary knowledge to secure relevant resources and organize venturing activities. Scholars argue that industry-specific experience shapes entrepreneurs’ subjective entrepreneurial knowledge (Kor et al., 2007). Founders with little industry experience are more limited in the range of expertise and competence they can draw upon (Wasserman, 2003).

Additionally, entrepreneur’s prior professional experience such as industry experience not only contributes to “what you know,” it can also contribute to “who you know” (Hsu, 2007, p. 724). In matter of fact, entrepreneur’s industry experience is often viewed as a great asset for an entrepreneur (Brush et al., 2001) and is valued by potential investors such as venture capitalists in making investment decisions (MacMillan et al., 1985). Founders or founding teams with industry experience can take advantage of their social ties that have been formed in the focal industry to obtain legitimacy and commitments from existing business partners for their new businesses (Delmar and Shane, 2006). In fact, scholars find that experienced founders engage in more legitimacy-seeking behaviors (Perry et al., 2011). Studies also find that prior industry-specific experiences positively influence the likelihood of obtaining venture finance (Eckhardt et al., 2006). In sum, the external connections derived from industry experience can be an invaluable capital for a nascent venture as they help bridge the founders/founding teams with critical resource providers (Burt, 2009; Shane and Stuart, 2002).

The above arguments lead to the following hypothesis:

**H1.** Founding team industry experience increases the likelihood of new venture creation.

**Founding team venturing experience**

Founding team venturing experience refers to a founding team’s prior experience in being involved with venturing initiatives, or owning a private business (Wright et al., 1998). In a field study investigating successful new ventures’ profiles, Duchesneau and Gartner (1990) found that one of the successful new ventures’ profile is that entrepreneurs have prior venturing experience. Venturing itself is a lived experience (Morris, 2015) in which entrepreneurs are shaped and created by venturing events (Morris et al., 2012). Scholars have argued that prior entrepreneurial experience enhances the number of opportunity identifications (Gruber et al., 2012; Westhead et al., 2009). In exploring the antecedents of entrepreneurial cognition of habitat (experienced) entrepreneurs, scholars have asked whether experienced entrepreneur presents unique cognitive patterns or characteristics during their venturing process than novice entrepreneurs (Grégoire et al., 2011; Ucbasaran et al., 2008). Grégoire et al. (2010), for example, found that experienced entrepreneurs used prior knowledge
to allow them to identify new patterns of meaning and draw the entrepreneurial implications of these patterns. Similarly, Forbes (2005) suggested that entrepreneurs are not homogeneous in their cognitive patterns and such differences can be explained (at least partially) by their prior entrepreneurship experiences. Zhao et al. (2005) found that entrepreneurial experience is positively related to entrepreneurial self-efficacy—that is, the entrepreneur’s belief in their ability to successfully launch an entrepreneurial venture, an important antecedent to entrepreneurial intention.

From a decision-making perspective, a pre-ownership experience in a highly similar business helps the founder (or founding teams) to better understand the customers, suppliers and competitors associated with the specific industrial environment (Chandler, 1996). Besides, non-routined entrepreneurial events contribute to entrepreneurs’ stock of knowledge (Reuber and Fischer, 1999). Venturing experience provides the venture with skills and expertise in organizing, coordinating, planning and motivating people (Chandler and Jansen, 1992; Reuber and Fischer, 1994). In a study comparing experienced (serial) entrepreneurs and novice entrepreneurs, Baron and Ensley (2006) found that serial entrepreneurs tend to think about opportunities in more sophisticated and pragmatic ways from a business-model point view than novice entrepreneurs, allowing them be more effective in acting on identified business opportunities and making decisions. When facing a complex decision, such as decisions in the venturing process, experienced entrepreneurs are expected to theorize more from their own experiences, and to be more likely to go beyond the information given to them in a decision problem (Dew et al., 2009). In a highly ambiguous and uncertain venturing environment, lack of entrepreneurial experience may lead to more mistakes in decision making.

In addition, prior venturing experience sends a positive signal about the credentials of the founder or the founding teams to the potential investors, especially VCs (Hsu, 2004, 2007). Besides, founding teams with prior venturing experience have wider social network and are more effective to develop new ones (Mosey and Wright, 2007). These types of social capital are critical for the founding team to harness necessary legitimacy and resources for new venture creation (Blatt, 2009).

The above arguments lead to the following hypothesis:

**H2.** Founding team venturing experience is positively related to the likelihood of new venture creation.

### The moderating effect of industry context

Entrepreneurs do not operate in a vacuum, they work within the environment surrounding them (Gartner, 1985). In responding to uncertain founding conditions, the founding team needs to explore various options, evaluate diverse scenarios and generate a more comprehensive solution. Researchers have long been interested in the effect of the objective characteristics of the environment (from a contingency point of view) or the perceived environment by entrepreneurs (from a cognitive perspective) on entrepreneurs’ entrepreneurial intentions and activities (Edelman and Yli-Renko, 2010). Industrial organization economists consider that a firm’s industry environment has determinisitic impact on firm performance (Porter, 1985). Organization ecologists consider a firm’s industry environment as one of the most important founding conditions, critically influencing organizational mortality (Swaminathan, 1996). Scholars from cognitive perspective have examined how entrepreneurs view their founding environment and construct their cognitive framing through the venture creation process (e.g. Edelman and Yli-Renko, 2010; Hmieleski and Baron, 2006; McMullen and Shepherd, 2006; Shaver and Scott, 1992).

The following section examines the moderating effect of the nascent venture’s industry on the relationships between founding team experience and the likelihood of new venture creation.
This study distinguishes two basic types of industry environments in which new venture is created: high-technology industry vs low-technology industry (Covin et al., 1990; Feeser and Willard, 1989; Zahra and Neubaum, 1998). A high-technology industry is characterized by high levels of business risk and velocity, fast-shifting customer preferences and shortened product life cycles (Bahrami and Evans, 1995). Compared to low-technology industries, high-technology industries present a more complex and dynamic environment, which may require additional skills and capabilities beyond that brought to the venture by the individual entrepreneur (Gartner, 1985). One such knowledge is the founding team’s scientific capabilities (Deeds et al., 2000), which are deeply rooted in their domain knowledge and expertise of operating in a specific technology-driven industry. Founding teams with more domain experience (stock of domain knowledge) are more effective at exchanging and combining knowledge, leading to higher innovation (Collins and Smith, 2006). In addition, a high-technology industry is characterized by high velocity, dynamism and uncertainty. Scholars have noted that under such a scenario a highly experienced group will use significantly greater time in assessing the emerging situation but use less time in taking actions, as compared to a group with less experience (Kobus et al., 2001). This is consistent with the view from upper echelon theorists (Hambrick and Mason, 1984), who suggest that under environmental uncertainty managers’ demographic characteristics are more likely to manifest in organizational outcomes. In a highly dynamic and uncertain environment, an experienced founding team possessing higher inventory of knowledge, skills and experience will be better equipped in their understanding through the entrepreneurial cognition process, and move faster in their business venturing activities.

Creating a new venture in a high-technology industry also requires a tremendous amount of social capital (Florin et al., 2003). Venture creation is a complex and unstructured process, requiring the founding team to work with stakeholders such as venture capitalists, suppliers, banks, lawyers, etc. This is especially true for entrepreneurs venturing in the knowledge-intensive and capital-intensive high-technology industry. The founders/founding team’s connection to the venture capital community is critical. Well-developed venture capital networks provide tremendous incentives for entrepreneurship by lowering the difficulties of entering an industry (Florida and Kenney, 1988). Shane and Cable’s (2002) field study on 50 high-technology ventures reveals that most funded venture proposals tend to come from referrals since the high-technology industry presents a higher level of information asymmetry. Studies have specially emphasized the importance of entrepreneurs’ social network in the context of high-technology industry. Such social ties greatly help the entrepreneur in discovering opportunities, accessing resources and gaining legitimacy as they pursue the opportunity (e.g. Elfring and Hulsink, 2003). Therefore, based upon these arguments it is expected that in the high-technology industry the founding team’s experience (industry as well as venturing) will have a greater impact on the venturing process than in a low-technology industry. This leads to the following hypotheses:

\[ H3. \] The positive relationship between founding team industry experience and the likelihood of new venture creation is stronger in the high-technology industry than in the low-technology industry.

\[ H4. \] The positive relationship between founding team venturing experience and the likelihood of new venture creation is stronger in the high-technology industry than in the low-technology industry.

**Method**

**Data and sample**

The theoretical model and the hypotheses were tested utilizing data from the PSED II. The PSED II is a longitudinal data set of 1,214 nascent entrepreneurs identified from a
random digit dialing telephone survey of 31,845 households in the USA (Reynolds and Curtin, 2007). To qualify as “nascent entrepreneurs,” i.e. individuals who were in the process of starting a business, respondents answered “yes” to the following three questions: Are you, alone or with others, currently trying to start a new business, including any self-employment or selling any goods or services to others? Are you, alone or with others, currently trying to start a new business or new venture for your employer, an effort that is part of your normal work? Are you, alone or with others, currently the owner of a business you help manage, including self-employment or selling any goods or services to others? In addition, respondents needed to meet three additional criteria. First, they performed some startup activities in the past 12 months. Second, they expect to own all or part of the new firm. Third, the imitative had not had a period of profitability in the past 12 months. Based on these selection criteria, the initial number of cases available for analysis was 860.

The following procedure was used to generate the final sample. First, non-independent ventures such as purchase or takeover of an existing business, franchise or startup sponsored by existing business were eliminated. Second, since this study is interested in team-based nascent ventures, only the ventures whose founding team size is equal or greater than two, and had already been established were considered. Based on these criteria, the final sample included 446 nascent venture founding teams.

**Measurements**

With three follow-up rounds of data collection (the initial round and two subsequent rounds, 12 and 24 months after the initial survey), the PSED II survey allows us to investigate whether the founding team had successfully launched a new business. The dependent variable new venture creation was coded as a “1” (success) if the status of new business is reported as “operating,” otherwise as a “0.” The status variable was consolidated from all the three follow-up rounds (overwriting the previous status with the latest one).

Studies on entrepreneurial teams have largely suggested that founding teams’ overall industry experiences have positive impact on venture performance, in view of the teams’ greater level of understanding and familiarity of business environment (e.g. Boeker and Wiltbank, 2005). Similarly, team industry experience has been found to have positive relationship with venturing success (Bates, 1990). Each founding team member was asked how many years of experience did they have in the industry in which the nascent venture is in? Founding team industry experience was calculated as the mean of the years of industry experience of each team member.

Founding team venturing experience was captured by the mean of number of startups previously established by founding team members. Research suggests that prior entrepreneurship experience helps building new businesses (Krueger, 1993).

The moderator variable is the industry type, for the industry the nascent venture was being launched in. This was coded as a dummy variable for high-technology vs low-technology industry. The nascent entrepreneurs were asked the following question, “Would you consider this (new) business to be hi-tech?” The dummy variable high-technology industry was coded as “1” for a response as “Yes,” and “0” for others.

Several control variables were included in the model, including average age of founding team members, founding team size and business plan development. Entrepreneurship literature has long suggested demographic characteristics of entrepreneurs such as entrepreneur age to be an important predictor of entrepreneurial outcomes (e.g. Edelman and Yli-Renko, 2010; Gartner, 1985; Shook et al., 2003). Average age of the founding team is calculated as the mean of team members’ ages. Founding team size is found to be associated with new venture survival and growth (Delmar and Shane, 2006; Eisenhardt and Schoonhoven, 1990). Founding team size is measured by the head count of the founding team. Finally, scholars have argued that business plan development is an important precursor of
venture creation (Delmar and Shane, 2003; Liao and Gartner, 2006). The nascent entrepreneurs were asked whether they have formally prepared, informally written, or, unwritten a business plan. A dummy variable business plan development was created and coded as “1” if a business plan has been prepared or informally written, and “0” if it is unwritten.

Analyses and results

Binominal logistic regression was employed to analyze the effect of founding team experience on new venture creation. As an analytical technique, binominal logistic regression is appropriate when the dependent variable is dichotomous independent variable of any type. The technique applies maximum likelihood estimation, after transforming the dependent variable into a logit variable (the natural log of the odds of the dependent variable occurring or not). In this way, logistic regression estimates the probability of a certain event occurring (Pampel, 2000). This paper employed a hierarchical approach in analyzing both the main and interaction effects. First, a base model of logistic regression was created, which included all the control variables. Then, independent variables and moderating variables were subsequently added in the full models, in stages. The significance of the difference between the full models and the nested base model was tested by using \( \chi^2 \) tests. A significant \( \chi^2 \) test means that the additional variance of probability of persistence is explained by the added-on predictors.

Table I reports the means and standard deviations of dependent, independent, moderating and control variables and their correlations. Table II reports the results obtained from the hierarchical logistic regressions. Model 1 only included control variables.

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<th>Mean</th>
<th>SD</th>
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<th>4</th>
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<tr>
<td>1. New venture creation</td>
<td>0.61</td>
<td>0.48</td>
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<tr>
<td>2. Average age of founding team members</td>
<td>42.72</td>
<td>11.68</td>
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<td>3. High-technology industry (dummy)</td>
<td>0.17</td>
<td>0.38</td>
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<td>4. Founding team size</td>
<td>2.36</td>
<td>0.72</td>
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<td>5. Business plan development (dummy)</td>
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<td>6. Founding team industry experience</td>
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<td>7. Founding team venturing experience</td>
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Notes: \( n = 446 \). * \( p < 0.05 \); ** \( p < 0.01 \); *** \( p < 0.001 \)

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<th>Model 1</th>
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<tr>
<td>Intercept</td>
<td>-1.17</td>
<td>-1.21</td>
<td>-1.13</td>
</tr>
<tr>
<td>Average age of founding team members</td>
<td>0.04***</td>
<td>0.03**</td>
<td>0.03**</td>
</tr>
<tr>
<td>High-technology industry</td>
<td>0.22</td>
<td>0.16</td>
<td>-0.04</td>
</tr>
<tr>
<td>Founding team size</td>
<td>-0.06</td>
<td>-0.01</td>
<td>-0.04</td>
</tr>
<tr>
<td>Business plan development</td>
<td>0.07</td>
<td>0.02</td>
<td>0.02</td>
</tr>
<tr>
<td>Founding team industry experience</td>
<td>0.05**</td>
<td>0.06**</td>
<td></td>
</tr>
<tr>
<td>Founding team venturing experience</td>
<td>-0.27</td>
<td>-0.44**</td>
<td></td>
</tr>
<tr>
<td>Founding team industry experience × high-technology industry</td>
<td>-0.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Founding team venturing experience × high-technology industry</td>
<td>1.56**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of observations</td>
<td>446</td>
<td>446</td>
<td>446</td>
</tr>
<tr>
<td>Likelihood ratio ( \chi^2 )</td>
<td>21.24***</td>
<td>30.73***</td>
<td>38.56***</td>
</tr>
<tr>
<td>( \Delta \chi^2 )</td>
<td>9.49***</td>
<td>7.83***</td>
<td></td>
</tr>
<tr>
<td>Pseudo ( R^2 )</td>
<td>0.04</td>
<td>0.07</td>
<td>0.07</td>
</tr>
</tbody>
</table>

Notes: * \( p < 0.05 \); ** \( p < 0.01 \); *** \( p < 0.001 \)
Model 2 tested the likelihood of venturing success on both control and independent variables. Model 3 tested the moderating effects of the high-technology industry dummy on the relationships between independent variables and new venture creation. The positive change of $\chi^2$ values and their significance levels confirm that adding the independent variables as well as the moderating variable helped improve the overall explanatory power of the model on the likelihood of venturing success.

$H1$ predicted that founding team industry experience is positively associated with the likelihood of new venture creation. Model 2 in Table II shows that the coefficients for founding team industry experience are positive and significant ($p < 0.01$). This suggests that a founding team with higher level of industry experience has a greater probability of launching a new business. For example, Model 2 reports that the coefficient of founding team industry experience is 0.05, indicating that the odds ratio for founding team industry experience is 1.051. Therefore, everything else being equal, a 1 percent increase in the founding team industry experience will increase the likelihood of new venture creation by 5.1 percent. Thus, $H1$ is strongly supported.

$H2$ predicted that founding team venturing experience is positively associated with the likelihood of new venture creation. Model 2 in Table II reported that the coefficients for the variable founding team venturing experience are negative, and not significant. Therefore, $H2$ was not supported.

$H3$ predicted that the relationship between the founding team industry experience and the likelihood of new venture creation is stronger in a high-technology industry than in a low-technology industry. The results in Model 3 report the interaction effect of founding team industry experience and the high-technology industry dummy variable. The coefficient for the interaction term between founding team industry experience and the high-technology industry dummy variable is negative, and not significant (Model 3, $b = -0.03$, ns). Therefore, $H3$ is not supported.

$H4$ predicted that the relationship between the founding team venturing experience and the likelihood of new venture creation is stronger in a high-technology industry than that in a low-technology industry. The results in Model 3 report the interaction effect of founding team venturing experience and the high-technology industry dummy variable. The coefficient for the interaction term between founding team venturing experience and the high-technology industry dummy variable was positive and significant (Model 3, $b = 1.56$, $p < 0.05$), suggesting that in a high-technology industry environment, the founding team venturing experience will have a greater positive impact on the likelihood of new venture creation than that in a low-technology industry environment.

Following Dawson’s (2014) suggested procedure on plotting interaction effects in logit models, additional analysis was conducted. A graphical representation of the interaction effect is depicted in Figure 1.

![Figure 1. The moderating effect of high-technology industry](image-url)
Figure 1 suggests that the impact of founding team venturing experience on the likelihood of new venture creation becomes greater in a high-technology industry, compared to that in a low-technology industry. As depicted in the figure, the slope of the regression line representing the high-technology industry is steeper than the one representing the low-technology industry, meaning that an increase in one unit of founding team venturing experience results in more of the likelihood of new venture creation in a high-technology industry than that in a low-technology industry. This provides additional support for \( H4 \).

**Post hoc analyses**

A post hoc analysis was conducted to increase the confidence in the findings. This post hoc analysis used the total years of industry experience of the team members to measure founding team industry experience. Similarly, to measure founding team venturing experience the total number of ventures the team members had set up prior to the present venturing initiative was used. The results were along similar lines. As predicted, founding team industry experience had a significant positive relationship with the likelihood of new venture creation \((b = 0.02, \text{odds ratio } = 1.02, p < 0.01)\). The coefficient of the interaction term between founding team venturing experience and high-technology industry was positive and significant \((b = 0.69, p < 0.05)\), suggesting that the impact of founding team venturing experience on the likelihood of new venture creation is stronger in the high-technology industry than that in the low-technology industry. This analysis failed, however, to find a significant relationship between founding team venturing experience and the likelihood of new venture creation, as also the moderating effect of high-technology industry on the relationship between founding team industry experience and the likelihood of new venture creation.

**Discussion**

This study extends the current literature (e.g. Delmar and Shane, 2006; Muñoz-Bullon et al., 2015) on the impact of founding team experiences in nascent ventures. Specifically, the study fills a research gap by focusing on the team's impact on the critical and nascent venturing gestation stage, as opposed to how the founding team affects the venture post-creation. By investigating the main effects of founding team experiences (industry as well as venturing) and the interactive effect of the team experiences and industry context on the likelihood of new venture creation, this study was able to show the relative importance of these two types of experiences, and especially in high-technology industry contexts.

The study results show that founding team industry experience had a significant and positive impact on the likelihood of new venture creation. This finding is consistent with prior research, which suggests that industry experience matters in the venturing process (e.g. Delmar and Shane, 2006; Reuber and Fischer, 1999). The new venture creation process encompasses four properties: intentionality, resources, boundary and exchange (Katz and Gartner, 1988). These findings suggest that founding team industry experience likely has a positive influence on all these four aspects of the venturing process.

Surprisingly, contrary to what had hypothesized, the study found that the founding team's venturing experience did not have a significant effect on the likelihood of new venture creation. In their study, Delmar and Shane (2006) noted that the impact of a founding team's startup or venturing experience on venture survival is positive, but non-linear and subject to diminishing returns. In contrast, this study found that the founding team's venturing experience does not have a significant impact on venture creation. Similar findings exist in other studies, e.g. that founding team venturing experience has no significant influence in improving venture performance (Casson, 1987). The mixed findings suggest that additional research is needed to understand the exact
nature of the venture creation experience and how it benefits entrepreneurial firms, pre- and post-venture gestation. In discussing the role of entrepreneurial learning, authors have noted that different types of entrepreneurs (novice, serial and portfolio) exhibit different learning behaviors, based on prior business ownership experience (Westhead et al., 2005). While prior entrepreneurship experience can bring certain assets to the founding team, it may also bring in liabilities for serial/portfolio entrepreneurs such as diminishing motivation, hubris, overconfidence or illusion of control (Simon et al., 2000; Westhead et al., 2005). Nevertheless, findings contrary to the hypothesized main effect of prior venturing experience on the likelihood of new venture creation suggest that more fine-grained analysis is needed, especially at the team level. For example, studies have shown that a “shared” venturing experience (Teal and Hofer, 2003; Zheng, 2012) or shared work experience (Roure and Maidique, 1986) among founding team members importantly affects venture outcomes.

The present study failed to find an interactive effect of high-technology industry and founding team industry experience on the likelihood of new venture creation, contrary to the prediction. This is counter to the conventional view in the field about the benefit of industry experience on entrepreneurial performance in high-technology industries (e.g. Casson, 1987). This result leads us to think further on some unique features of entrepreneurship process in a high-technology industry. The results reiterate that it is important to distinguish among the different stages of new venture development when studying the impact of founding team experience. As mentioned earlier, previous studies on founding teams have tended to examine whether and how founding teams influence the performance characteristics of a new venture, such as profitability, growth, sales, new product introduction and so on (Klotz et al., 2014). In contrast, by adopting an entrepreneurial process perspective, this study focuses on the impact of founding team experience on venture creation itself, even before the new venture is launched and finds interesting results. In doing so, this research highlights why it may be important to assess the impact of founding teams at different stages of creation of the new venture, especially before and after it is launched. Related to this, the present study also calls for greater understanding of the technology context itself. High-technology entrepreneurship is filled with “incessant novelty and innovation” and “never-ending stream of kaleidoscopic change” (Bahrami and Evans, 1995, p. 62). Existing knowledge base is made obsolete faster in a high-technology industry environment (Elfring and Hulsink, 2003). In such high-velocity environments, rigid commitments to insights from prior industry experience on the part of the founding team may even be counterproductive (Chandler and Hanks, 1994). Indeed, entrepreneurs that possessed less experience in the field’s core tend to head more innovative firms (Cliff et al., 2006). Yet, scholars have argued that environmental dynamism and hostility erode managers’ abilities to predict future events and their impact on organizations (Khandwalla, 1977). These factors may neutralize the positive impact of founding team industry experience on the likelihood of venture creation in a high-technology industry, thus offering support for the results.

While this study did not find a main effect interestingly, the hypothesis predicting the moderating effect of high-technology industry on the relationship between founding team venturing experience and the likelihood of new venture creation was supported. There may be a few plausible explanations for this finding. As previously noted, access to venture capital and its network is critically important for high-technology entrepreneurship (Florida and Kenney, 1988). Scholars find that prior venturing experience, even in a non-technology sector, is crucial for entrepreneurs who aim to set up a high-technology venture. This is because a prior venturing experience provides the entrepreneur knowledge to develop strategy, and build connections for acquiring funding for the development of a technology-based venture (Boussouara and Deakins, 1999). Similarly, in science-based technology ventures, entrepreneurs...
with prior business ownership experience have broader social networks. They are, therefore, more effective in developing network ties between scientific networks and industry networks than other less-experienced entrepreneurs (Mosey and Wright, 2007).

The difference in the nature of the findings relating to the main effects as well as their interaction with the nature of industry is especially noteworthy and sets up directions for future research. Previous studies have largely tended to treat entrepreneur/founding team prior work experience as one single- or aggregative-level measure, without differentiating the potential unique roles the different types of founding team experience could play in the venturing process (e.g. Reuber and Fischer, 1999). The findings of this study suggest that founding team industry experience and venturing experience not only have different direct effect on the venturing process, but also work differently depending on the entrepreneurial context (in this case, the high-technology environment), thus influencing the likelihood of new venture creation. Studies on TMTs in entrepreneurial firms have demonstrated that different types of TMT experience may have different effects on entrepreneurial growth. Given the unique nature of the entrepreneurial overall experience, it may be important to “bundle” specific TMT experiences in order to maximize TMT effectiveness and entrepreneurial growth (Kor, 2003). Similarly, the results of this study indicate that the impact of founding team experience on new venture creation may vary with both the type of the experience and the context of venture creation. On the one hand, industry experience and venturing experience influence the venture creation process in very different ways. On the other hand, the specific entrepreneurial context (high technology vs others) influences the relationship between founding team experiences and venture creation differently. Therefore, as a direction for future research the authors suggest that future studies on founding team experience and entrepreneurial process outcomes should consider the relative importance of founding team experience, and can benefit from taking a contingency approach to examining the founding team’s impact on venture creation.

**Conclusion**

This research extends the current literature on the importance of founding team experiences in nascent ventures (e.g. Delmar and Shane, 2006; Muñoz-Bullon et al., 2015) and makes several contributions. First, in contrast to most extant research that tended to examine the impact of founding team experience on firm outcomes post-venture creation, this study considered to what extent founding team experience affects the likelihood of the venture creation process itself. Second, the study advances the understanding of the differential roles played by different types of team experience, by teasing out the differential impact of founding team industry experience vs the founding team venturing experience. Third, this research highlighted the importance of the entrepreneurial context—in this instance, the specific context of industry (high technology vs low technology) on the relationship between founding team experience and likelihood of venture creation. Specifically, the present study noted that founding team experiences combine in interesting ways to impact the likelihood of venture creation, depending on whether the operating context is high-technology industry or not.

This study has certain limitations. The paper tested the effect of founding team experiences on venture creation rather than venture continuation (e.g. Delmar and Shane, 2003; Liao and Gartner, 2006), which means the sample represents nascent entrepreneurs who are still trying but do not have an operating business. When analyses were undertaken to include the “still trying” group as a part of the successes in the dependent variable, no significant differences in the results were found. One additional caveat of this study is that the study only relies on the number (quantity) of the ventures that individual members might have started, or the number of years of industry experience that they have had, prior
to involving in the venturing process for creating the focal firm. Thus, and given the archival nature of the data, the study was not able to actually observe the team processes involved in utilizing these experiences (such as shared experience) to help create the venture, under the two types of industry contexts.

Limitations notwithstanding, the study findings indicate a number of future research opportunities. First, future researchers may consider the impact of other types of founding team experiences and their impact on new venture creation. Second, as already noted, to investigate “how” founding team experience influences the venturing process, one may need to go beyond the demographic attributes of experience and take into account the underlying team process of learning from the experience. The latter could include, for example, shared industry experience, shared venturing experience or team experience heterogeneity. Third, the process of venture creation may be an effectual process (Sarasvathy, 2001), a planned process (Shane and Delmar, 2004) or a bricolage (Baker and Nelson, 2005). The examination of the founding team experience at the nascent stage might shed light on the choice of an effective process leading to venture formation. Fourth, this study calls future research incorporating a multi-level and contingency approach in analyzing the role of founding team experience in the entrepreneurship process. Are there any specific types, or, a “bundle” of team experience that are most effective in different stages of new venture creation, and/or, under different contexts?

The findings presented in this study provide important implications for entrepreneurial practitioners. The results inform us about the importance of founding team industry experience and venturing experience in the nascent stage of the venture. The positive relationship between founding team industry experience and new venture creation suggests that the founding team should include more members with higher level of industry experience. In addition, in a high-technology industry, the founding team’s venturing experience becomes even more salient, in terms of its impact on the venturing process. Therefore, a team with higher levels of prior venturing experience (does not matter whether it was in a high-technology sector or not) is critical for the success of the new venture being created. In effect, developing a nuanced understanding of the different types of founding team experience, and the effect of such team experience in the operating industry context is critically important to team assembling and organizing for the successful launch of new ventures.

References


Morris, M.H. (2015), Entrepreneurship as Experience, Wiley Online Library, available at: https://doi.org/10.1002/9781118785317.weom030039


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The effects of entrepreneurial orientation dimensions on performance in the tourism sector

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Abstract
Purpose – The purpose of this paper is to examine the influence of entrepreneurial orientation (EO) dimensions on firm performance in the tourism sector. The goal is twofold: on the one hand, the paper aims to test whether EO dimensions are still significant determinants of performance after controlling for possible confounding factors; on the other hand, it aims to address the question of which EO dimension exerts the strongest effect on performance.

Design/methodology/approach – A survey was carried out in the Sardinian accommodation sector in 2012 and 224 questionnaires were collected. The multidimensional EO constructs were adopted.

Findings – The results show that innovativeness, proactiveness and autonomy were significantly associated with tourism firm performance, whereas risk-taking and competitiveness were not.

Research limitations/implications – The results are limited to the Sardinian accommodation context. Self-reported data were used to measure firm performance. Further research works could replicate the analyses using objective firm performance not only in similar touristic destinations but also in other countries and incorporating other industries.

Practical implications – The study suggests educational and managerial implications. Entrepreneurs in the tourism sector should be encouraged to adopt an innovative, autonomous and proactive approach in managing their firms.

Originality/value – The study advances entrepreneurial knowledge in the tourism sector and in particular in the accommodation industry. The multidimensional EO approach has never been adopted among touristic firms. Furthermore, considering that EO research has been overlooked in the country of Italy, this study’s contribution is also providing evidence from an area that has received minimal attention to date.

Keywords Entrepreneurial orientation, Multidimensional approach, Accommodation sector, Ordered logit regression, Tourism sector

Paper type Research paper

Introduction
Tourism encompasses many different services, facilities and attractions (Leiper, 1979; Smith, 1988) that create a lot of entrepreneurial opportunities. In many countries and regions, the tourism industry is considered to be one of the largest industries when it comes to wealth production and job creation. During the last decade, despite the general negative macroeconomic context, it is worth noting that tourism has been constantly growing. In 2016, tourist demand grew for the seventh consecutive year reaching 1,235 million international tourist arrivals with the strongest increasing recorded in Africa, Asia and Pacific regions. The growth in tourism obviously influenced the increase in the demand in touristic services (World Tourism Organization, 2017).

Tourism is considered an appealing industry capable of attracting many entrepreneurs. Often, however, these “improvised entrepreneurs” enter into the market without sector-specific
experience and with inadequate managerial skills or entrepreneurial attitudes (Hjalager, 2010). Among various causes of failure in the sector, the most frequent concern is low managerial competence and lack of experience (Kirby, 2003).

It seems natural to focus research efforts on the analysis of entrepreneurial activities and attitudes in this promising economic sector. Recent years have seen an increase in the number of studies dealing with entrepreneurship in the hospitality and tourism industry (Li, 2008; Solvoll et al., 2015). Some studies have shown how entrepreneurs recognize opportunities during chaotic periods (Russell and Faulkner, 1999, 2004). Within the research branch related to small and medium-sized tourism enterprises (Ateljevic, 2007; Shaw, 2005; Thomas et al., 2011), many researchers have focused on the personality traits and attitudes of entrepreneurs (Legohérel et al., 2004; Lerner and Haber, 2001; Getz and Petersen, 2005). Finally, some authors have shown a positive relationship between entrepreneurial orientation (EO) and tourism firms' performance (Jogaratnam et al., 1999; Jogaratnam, 2002; Sul and Khan, 2006; Jogaratnam and Tse, 2006; Tajeddini, 2010).

This study aims to examine how entrepreneurially oriented tourism firms are and to what extent entrepreneurial activities contribute to better performance in the Sardinian context. Sardinia represents a renowned tourism destination where entrepreneurial opportunities do not yet seem to be totally exploited[1]. This could be related to a lack of entrepreneurial capabilities. This makes the Sardinian case a particularly interesting context to see whether EO dimensions can make the difference in determining firms' performances. This paper adopts a multidimensional EO approach to examine the degree of the five EO dimensions – innovativeness, risk-taking, proactiveness, competitiveness and autonomy – and their individual contributions to the increasing/decreasing performance of tourism firms. So far the multidimensional approach in tourism studies has not received much attention. In fact, previous studies conducted in the sector have adopted the unidimensional approach focusing on the linkage between the EO-performance considering all dimensions as a unique one (Jogaratnam et al., 1999; Jogaratnam, 2002; Jogaratnam and Tse, 2006).

A better understanding of this relationship could produce relevant policy, education and managerial implications; activities and abilities such as risk-taking or innovativeness could be encouraged through public policy incentives or educational courses addressed to prospective or current entrepreneurs involved in tourism businesses.

To achieve these ends, a survey was carried out in the Sardinian accommodation sector. The accommodation sector was chosen since it is more directly connected to the tourism industry than any other business (Smith, 1988). The paper consists of five sections. Following the introduction, the second section presents the EO construct and describes its relationship to firm performance, paying particular attention to tourism firms; the third section briefly describes the empirical context where the survey was carried out; the fourth section describes the methodology and reports the results; and finally, the fifth section discusses the findings and outlines the main conclusions.

**Literature review**

EO suggests that some activities, which can be considered entrepreneurial, develop inside firms, affecting the decisions, features, processes, actions and performance of an organization (Covin and Slevin, 1991; Lumpkin and Dess, 1996). The EO construct comes from the strategic management literature (Miller, 1983; Mintzberg, 1973) and deals with the strategy-making process. According to the strategic management perspective, the entrepreneurial posture of a firm is an important component with regard to achieving organization goals and good performance. It is viewed as being determined by the way the firm adapts to its external context (Miles and Snow, 1978).

EO was initially born as a scale to measure entrepreneurial firm attitudes (Miller, 1983). Later, EO measurements were often used in empirical analyses with the aim of investigating the
linkage between EO and firm performance (Covin and Slevin, 1989, 1991; Lumpkin and Dess, 1996; Gupta and Gupta, 2015; Wales, 2016). Thus, several empirical studies have found a positive relationship between EO measures and performance among firms from different industries and national cultural contexts (Rauch et al., 2009; Wales et al., 2013; Gupta and Dutta, 2016).

The EO construct consists of five dimensions: innovativeness, proactiveness, risk-taking, competitive aggressiveness and autonomy (Lumpkin and Dess, 1996; Dess and Lumpkin, 2005). These dimensions encompass the most acknowledged entrepreneurial skills and have been extrapolated from the entrepreneurship and strategy-making process literature. Innovativeness involves the firm’s attitude to developing the innovative processes that often lead to new products, new services and technological discoveries (Lumpkin and Dess, 1996; Schumpeter, 1934). Proactiveness concerns the firm’s ability to anticipate market changes, in particular customer trends; it therefore relates to a proactive orientation to seize market opportunities (a sort of Kirznerian alertness). Using a metaphor, in a chess competition, proactive companies are able to anticipate the moves of other players and see new winning strategies, rather than limiting themselves to defending the king for the whole match (Kirzner, 1973; Shane, 2003; Lumpkin and Dess, 1996). Proactive companies are trend-setters rather than followers.

Risk-taking deals with the firm’s inclination to undertake risky activities with uncertain implications (Knight, 1921), such as exposure to debts and risky investments (Lumpkin and Dess, 1996). Competitiveness concerns the firm’s attitude toward dealing with competitors. It consists of continuously monitoring and countering rivals’ strategies (even by imitating other firms) with the aim of achieving a competitive advantage and a better performance (Porter, 1985). Autonomy deals with the predisposition toward suitable conditions for development and the subsequent implementation of innovative ideas. An organizational culture that promotes new initiatives without hindering individual creativity could be considered autonomous (Lumpkin and Dess, 1996).

A later improvement in EO research has been the investigation of all dimensions together, rather than considering them as unique. This is the so-called multidimensional approach (Covin and Wales, 2012; Lumpkin and Dess, 1996). How active a firm is in terms of each dimension seems to vary in relation to firm stage, type of production or service and environment (Miller, 2011). The multidimensional approach can provide additional details about the origin of EO and the influence of each dimension on firm performance.

Although the majority of empirical analyses on the relationship between EO and performance have used the unidimensional scale, an increasing number of studies adopting the multidimensional approach can be found (Rauch et al., 2009; Wales et al., 2013). In this regard, Table I summarizes articles that investigated the contribution of the single EO dimensions on firms’ performance, highlighting dimensions analyzed, the country where the study was conducted and samples. Looking at EO studies in general, it is noteworthy that despite the fact that there has been an increase in terms of different national cultural contexts, many countries, such as Italy, remain unexamined (Wales et al., 2013).

With regard to the tourism sector, previous studies focused on EO-performance relationship have tended to neglect the contribution of each single dimension (Jogaratnam et al., 1999; Jogaratnam, 2002; Jogaratnam and Tse, 2006). As noted by Hjalager (2010), innovativeness is a unique entrepreneurial attitude, which has been deeply examined in tourism. For example, Tajeddini (2010, 2011) analyzed the relationship between innovativeness and performance in the Swiss hotel industry. Evidence from both studies suggested that innovative activities have a significant and positive effect on performance in the hotel industry. This paper seeks to get a more in-depth look at how EO impacts on firm performance. It accomplishes this aim by investigating the impact of each entrepreneurial dimension separately within the accommodation sector in a regional Italian context. In fact, so far, the multidimensional EO approach has never been adopted among touristic firms and EO research in Italy has been previously overlooked.
<table>
<thead>
<tr>
<th>Paper</th>
<th>Journal</th>
<th>Sample</th>
<th>Country</th>
<th>EO dimensions investigated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dai <em>et al.</em> (2014)</td>
<td><em>Journal of Business Venturing</em></td>
<td>500 SMEs spanning 10 industries</td>
<td>USA</td>
<td>Proactiveness, innovativeness, risk-taking</td>
</tr>
<tr>
<td>Gunawan and Duysters (2016)</td>
<td><em>Entrepreneurship and Management Journal</em></td>
<td>120 SMEs in footwear industry</td>
<td>Indonesia</td>
<td>Proactiveness, risk-taking</td>
</tr>
<tr>
<td>Kollmann and Stockmann (2014)</td>
<td><em>Entrepreneurship Theory &amp; Practice</em></td>
<td>228 ICT companies</td>
<td>Germany</td>
<td>Proactiveness, innovativeness, risk-taking</td>
</tr>
<tr>
<td>Kozubíková <em>et al.</em> (2015)</td>
<td><em>Transformations in Business and Economics</em></td>
<td>1,141 SMEs</td>
<td>Czech Republic</td>
<td>Innovativeness, competitive aggressiveness, proactivity</td>
</tr>
<tr>
<td>Kraus (2013)</td>
<td><em>The Services Industries Journal</em></td>
<td>310 service firms</td>
<td>Austria</td>
<td>Proactiveness, innovativeness, risk-taking</td>
</tr>
<tr>
<td>Kreiser <em>et al.</em> (2013)</td>
<td><em>Small Business Economics</em></td>
<td>1,668 SMEs across 9 industries</td>
<td>Australia</td>
<td>Proactiveness, innovativeness, risk-taking</td>
</tr>
</tbody>
</table>

Table I. Articles examining EO dimensions-performance relationship (continued)
The context of our analysis: the Sardinian destination

A survey was conducted in the Sardinian accommodation sector in 2012. Sardinia is an Italian island located in the center of the Mediterranean Sea and represents one of Italy’s most popular tourism destinations. Tourism growth started during the 1960s when a group of tycoons discovered a pristine part of the east coast. They were so impressed by the beautiful landscape, unspoiled nature and tranquillity that they decided to establish the “Costa Smeralda Consortium,” a residential destination to spend holidays and leisure time. In 1962, an economic and social development plan was initiated by the Region of Sardinia with the aim of strengthening tourism development on the island. These actions – together with the improvement of the general Italian economic condition – encouraged the rise in touristic demand, mainly based on seaside tourism. The rising demand brought about a growth in the tourism industry as well as in the accommodation sector. During the following decades, Sardinia became one of the world’s most famous tourism destinations. In the light of the weak economic situation that characterizes the island economy based mainly on traditional agro-pastoral activities and services, over the past few years the tourism sector has been rising, playing an important role in the growth of value added (Hospers, 2003). In 2011, the tourism sector produced 10.9 percent of Sardinia’s gross domestic product. This can be considered a significant result if compared to the national average of 7.4 percent (Becheri and Maggiore, 2013).

Although the island has become renowned for luxury tourism on the northeast coast, holiday solutions are copious and located everywhere. Crystal-clear water, white sand and a pleasant climate make Sardinia a seaside tourism basin of attraction. According to the 2010 CRENOS Report, 70 percent of total arrivals to the island are concentrated in the months from May to September. This produces seasonal problems such as strong pressures on tourism resources in some coastal destinations for a short period of the year,
unemployment outside summer months and a general territorial overload. To tackle seasonality, other forms of tourism that exploit the territorial characteristics of the island and that can be enjoyed all-year around have been promoted. These are as climbing, cycling, trekking, cannoning, kayaking, diving, wine and food experiences, etc. Most of these activities can be practiced in the internal part of the island and they especially attract guests from abroad. A latest type of tourism practiced along Sardinian shores all-year around is related to water boardsports like windsurf, kitesurf and surf. Due to windy weather and ideal wave conditions in specific shore locations, an increase in both local and foreign practitioners has been observed. The latter produce a tourism demand of goods and services especially during off-season period. On the supply side, several schools located all around the Sardinian coasts have been founded. In these structures, boardsports are taught to mainly foreign tourists. International arrivals have been growing over the last few years. Meanwhile, the number of domestic tourists is declining; they are also reducing both their period of stay and the expenditure devoted to leisure, probably because of the economic crisis (Istituto Nazionale Ricerche Turistiche, 2012). Table II provides data on arrivals, overnight stays and average duration of stay in Sardinia from 2007 to 2011. As shown in Table II, although there has been an overall reduction of arrivals, the number of arrivals of guests from abroad increased by about 10 percent from 2007 to 2011.

Analyzing the Sardinian accommodation sector, two main types of business can be observed: hotels and other structures, such as camping, summer houses, agritourism and bed and breakfasts. They differ in their supply of facilities, amenities, level of comfort and quality of service. Table III provides information about the types of accommodation that were officially registered in Sardinia during the period from 2009 to 2012.

Methodology

Data collection and sample

To analyze the relationship between EO and firm performance, a questionnaire addressed to accommodation managers and owners was designed. The questionnaire was then pre-tested by asking four academics and ten hotel owners to complete it. The pre-test was done in order to refine the research tool and make sure that the content was appropriate, clear and relevant. After this phase, some items were changed[2].

The population for this study comprised all the accommodation included in the Guide of Accommodation prepared by the Department of Tourism of the Sardinian local government (July 2012 version) with information freely available on the Sardinia Tourism website (www.sardegnaturismo.it), which is the official tourism website of the regional government. The guide includes most known and organized accommodations in Sardinia. The guide comprises 976 facilities, mainly hotels and camping accommodation, showing for each year

<table>
<thead>
<tr>
<th>Year</th>
<th>Domestic Arrivals</th>
<th>Domestic Overnight stays</th>
<th>Domestic Average length in stay</th>
<th>International Arrivals</th>
<th>International Overnight stays</th>
<th>International Average length in stay</th>
<th>Total Arrivals</th>
<th>Total Overnight stays</th>
<th>Total Average length in stay</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>1,528,445</td>
<td>8,238,807</td>
<td>5.4</td>
<td>802,554</td>
<td>3,920,022</td>
<td>4.9</td>
<td>2,330,999</td>
<td>12,158,829</td>
<td>5.2</td>
</tr>
<tr>
<td>2008</td>
<td>1,575,538</td>
<td>8,452,914</td>
<td>5.4</td>
<td>803,537</td>
<td>3,894,419</td>
<td>4.8</td>
<td>2,379,075</td>
<td>12,347,333</td>
<td>5.2</td>
</tr>
<tr>
<td>2009</td>
<td>1,564,219</td>
<td>8,243,836</td>
<td>5.3</td>
<td>883,178</td>
<td>4,066,854</td>
<td>4.6</td>
<td>2,447,397</td>
<td>12,310,690</td>
<td>5.0</td>
</tr>
<tr>
<td>2010</td>
<td>1,544,211</td>
<td>8,149,164</td>
<td>5.3</td>
<td>840,212</td>
<td>4,023,759</td>
<td>4.8</td>
<td>2,384,423</td>
<td>12,172,923</td>
<td>5.1</td>
</tr>
<tr>
<td>2011</td>
<td>1,355,554</td>
<td>6,975,572</td>
<td>5.1</td>
<td>884,739</td>
<td>4,467,864</td>
<td>5.0</td>
<td>2,240,293</td>
<td>11,443,436</td>
<td>5.1</td>
</tr>
</tbody>
</table>

Table II. Arrivals, overnight stays and average duration of stay in Sardinia (2007-2011)

Source: Our elaboration – data from Sardinia Statistics on tourism – http://sardegna.statistiche.it
accommodation a variety of information such as star rating, contact details, minimum and maximum overnight prices, website and e-mail address. The distribution of accommodation types in the guide is presented in Table IV. These mainly consist of hotels and camping accommodations. The guide includes most of the hotels, camping accommodations and resorts that were officially registered in Sardinia in 2012 (cf. Table III).

Each facility was contacted by e-mail. Once we had excluded accommodation with missing information about e-mail addresses or where the e-mail address turned out to be incorrect, the number of facilities was reduced to 867.

<table>
<thead>
<tr>
<th>Type</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotels</td>
<td>898</td>
<td>916</td>
<td>927</td>
<td>913</td>
</tr>
<tr>
<td>Camping and resorts</td>
<td>96</td>
<td>91</td>
<td>91</td>
<td>90</td>
</tr>
<tr>
<td>Summer housing and flats</td>
<td>300</td>
<td>324</td>
<td>372</td>
<td>426</td>
</tr>
<tr>
<td>Agritourism</td>
<td>590</td>
<td>617</td>
<td>614</td>
<td>639</td>
</tr>
<tr>
<td>Other accommodation types</td>
<td>1,752</td>
<td>1,966</td>
<td>2,025</td>
<td>2,036</td>
</tr>
<tr>
<td>Total</td>
<td>3,636</td>
<td>3,914</td>
<td>4,029</td>
<td>4,104</td>
</tr>
</tbody>
</table>

Note: *This category includes accommodations such as B&B, hostels and shelters*

Source: Sardinia Statistics Department (www.sardegnastatistiche.it)

<table>
<thead>
<tr>
<th>Type</th>
<th>Frequency</th>
<th>Percent</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hotel (star rating)</td>
<td>173</td>
<td>77.2</td>
<td>834</td>
<td>85.5</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>4.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>62</td>
<td>27.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>86</td>
<td>38.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>11</td>
<td>4.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>1.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guest house</td>
<td>2</td>
<td>0.9</td>
<td>7</td>
<td>0.7</td>
</tr>
<tr>
<td>Scattered hotel</td>
<td>6</td>
<td>2.7</td>
<td>8</td>
<td>0.8</td>
</tr>
<tr>
<td>Residential hotel</td>
<td>7</td>
<td>3.1</td>
<td>22</td>
<td>2.3</td>
</tr>
<tr>
<td>Camping</td>
<td>23</td>
<td>10.3</td>
<td>76</td>
<td>7.8</td>
</tr>
<tr>
<td>Summer housing and flats</td>
<td>7</td>
<td>3.1</td>
<td>9</td>
<td>0.9</td>
</tr>
<tr>
<td>Residence</td>
<td>3</td>
<td>1.3</td>
<td>7</td>
<td>0.7</td>
</tr>
<tr>
<td>Resort</td>
<td>3</td>
<td>1.3</td>
<td>13</td>
<td>1.3</td>
</tr>
<tr>
<td>Total</td>
<td>224</td>
<td>100</td>
<td>976</td>
<td>100</td>
</tr>
</tbody>
</table>

Type

Amenities

Swimming pool               | 110      | 49.1   |           |         |
Other different sport activities | 102      | 45.5   |           |         |
Rent bikes or other sports equipment | 106      | 47.3   |           |         |
SPA                         | 31       | 13.8   |           |         |
Excursions                  | 11       | 4.9    |           |         |
Only restaurant             | 42       | 18.8   |           |         |
Restaurants in total        | 179      | 79.9   |           |         |
No facilities               | 15       | 6.7    |           |         |

Family business

Yes                        | 116      | 51.8   |           |         |
No                         | 108      | 48.2   |           |         |

Source: Own calculation based on data from Guide of Accommodations (www.sardegnaturismo.it)
An e-mail was sent to the qualifying accommodation companies with a link to a web-based questionnaire. Although the use of e-mail surveys and online questionnaires presents many well-documented advantages (David and Sutton, 2011), such as low development costs, reduced response time and the opportunity to reach a broader population, some limitations are observed. In this specific case, these include the obvious selection of accommodation for which e-mail addresses were available, in addition to a relatively low response rate.

The data collection concluded around mid-October with 224 questionnaires completed and a response rate of 25.8 percent. However, this sample size can be considered satisfactory if compared to the response rates achieved in similar surveys carried out in the hospitality sector (Keegan and Lucas, 2005) and among small tourism and hospitality firms (Thomas et al., 1998).

**Accommodation and respondent profile**

Table IV provides some information about accommodation type and other features of the sample. The accommodation types in the sample provide a good representation of the accommodation types in the study population. For example, hotels and camping accommodations account for a share of 77.2 and 10.3 percent in the sample, whereas these two types account for a share of 85.5 and 7.8 percent in the study population (Table IV).

Most of the hotels were three-star (38.4 percent) or four-star rated (27.7 percent). The amenities provided by the sampled accommodation were mainly related to sports and recreational activities. Almost half of the sampled accommodation had a swimming pool (49.1 percent) and offered facilities for sports other than swimming (45.5 percent) and the possibility to rent bikes or other sports equipment (47.3 percent). A restaurant was the main service provided by 179 of the 224 respondents. As shown in Table IV, for 18.8 percent of the accommodation, a restaurant was the only amenity offered to clients, and 6.7 percent did not provide any amenities in addition to the room. It is also worth noting that the majority of the accommodation consisted of family businesses (51.8 percent).

The accommodation sector in Sardinia includes various business entities, both privately owned firms and public limited companies. The questionnaire was sent to the accommodation companies with a request that it should be filled in by a decision maker at the company (i.e. we made no distinction between owners and managers).

Table V provides some information about the profile of the respondents. Out of the 224 respondents, 128 (57.1 percent) were males and 96 (42.9 percent) females. The majority were between 41 and 50 years old (33.9 percent), and the second largest age group was between 31 and 40 years old (29.9 percent). A total of 64.7 percent had more than six years of experience in the tourism business. With regard to education, 6.3 percent of the respondents had a minimum compulsory education and 38.8 percent had a university degree or a higher educational level. Many of them had attended courses in tourism or hospitality (40.6 percent) and management or business (31.7 percent).

**Measures and econometrical strategy**

*Performance.* The hospitality industry mainly comprises small and medium-sized firms (Getz and Petersen, 2005). This makes it difficult to obtain objective performance data, due to the reluctance to externally communicate such data and the fact that there are no publicly available financial reports of such firms (Covin and Slevin, 1989; Murphy et al., 1996). This has led us to consider subjective performance measures. Performance has often been measured using self-assessment by owners/managers in business research (Dess and Robinson, 1984; Runyan et al., 2008) and also in EO-performance investigation (Rauch et al., 2009; Gupta and Wales, 2017). This has proven to be a reliable procedure to assess firm performance (Dess and Robinson, 1984; Wall et al., 2004) and to analyze the relationship between EO and firm performance (Rauch et al., 2009).
A possible problem related to the use of self-reported measures that adopt a common measurement method is the well-known “common method bias,” that is, the correlation between two self-reported variables may be inflated when they are measured by the same method. Therefore, given that our study uses self-reported measures, all the subsequent correlation analyses could be in principle affected by upward bias. A recent study carried out by Conway and Lance (2010) offers a discussion of this statistical bias concluding that in many cases the attenuation bias due to the measurement error typical of self-reported variables is generally able to compensate the upward bias coming from the common method. Furthermore, Rauch et al. (2009) argue that “It appears that the potential problem of common method variance, memory decay, or social desirability associated with self-reporting of performance does not generally pose a serious threat to the validity of the EO-performance relationship. The use of archival performance data produced relationships of similar magnitude” (p. 780).

Self-reported firm performance was measured by using two questions similar to those used in previous studies (Jogaratnam and Tse, 2006; Hallak et al., 2012): respondents were asked to express their level of satisfaction with the sales and profits of their firms over the last three years. The respondents were asked to answer on a seven-point scale ranging from highly dissatisfied (1) to highly satisfied (7). The choice of only two indicators of business performance – sales and profit – was in accordance with the suggestions of the hotel owners in the pre-test to use standard and well-known indicators. The sales indicator had a mean of 3.50 and a standard deviation of 1.61. The profit indicator had a mean of 3.38 and a standard deviation of 1.61.

Table V.
Respondent profile

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Relative frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>128</td>
<td>57.1</td>
</tr>
<tr>
<td>Female</td>
<td>96</td>
<td>42.9</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 30</td>
<td>26</td>
<td>11.6</td>
</tr>
<tr>
<td>31-40</td>
<td>67</td>
<td>29.9</td>
</tr>
<tr>
<td>41-50</td>
<td>76</td>
<td>33.9</td>
</tr>
<tr>
<td>51-60</td>
<td>40</td>
<td>17.9</td>
</tr>
<tr>
<td>&gt; 60</td>
<td>15</td>
<td>6.7</td>
</tr>
<tr>
<td><strong>Experience</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 5</td>
<td>79</td>
<td>35.3</td>
</tr>
<tr>
<td>6-10</td>
<td>48</td>
<td>21.4</td>
</tr>
<tr>
<td>11-20</td>
<td>46</td>
<td>20.5</td>
</tr>
<tr>
<td>21-30</td>
<td>28</td>
<td>12.5</td>
</tr>
<tr>
<td>&gt; 30</td>
<td>23</td>
<td>10.3</td>
</tr>
<tr>
<td><strong>Education level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compulsory education</td>
<td>14</td>
<td>6.3</td>
</tr>
<tr>
<td>High school degree</td>
<td>123</td>
<td>54.9</td>
</tr>
<tr>
<td>University degree</td>
<td>64</td>
<td>28.6</td>
</tr>
<tr>
<td>Master degree or higher</td>
<td>23</td>
<td>10.3</td>
</tr>
<tr>
<td><strong>Educational background</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management/business</td>
<td>71</td>
<td>31.7</td>
</tr>
<tr>
<td>Tourism/hospitality</td>
<td>91</td>
<td>40.6</td>
</tr>
<tr>
<td>Law</td>
<td>6</td>
<td>2.7</td>
</tr>
<tr>
<td>Engineering</td>
<td>2</td>
<td>0.9</td>
</tr>
<tr>
<td>Computer science</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td>Other</td>
<td>53</td>
<td>23.7</td>
</tr>
</tbody>
</table>

Note: n = 224
deviation of 1.61. The specific wording of the two questions was as follows: “How satisfied are you with the sales of your firm during the last three years (2009-2011)?” and “How satisfied are you with the profit of your firm during the last three years (2009-2011)?”

EO. To measure EO, a 15-item instrument was used (see Table AI). Each item was measured on a seven-point scale. The instrument was derived from previous studies and was composed of three metrics for each one of the five EO dimensions. The original nine-item instrument from Covin and Slevin (1989) was used for innovativeness, risk-taking and proactiveness. This instrument has been used in many empirical studies on EO (Rauch et al., 2009; George and Marino, 2011). The other two dimensions – competitiveness and autonomy – were mainly derived from a study by George et al. (2001). In particular, three items for autonomy and two items for competitiveness were used (items no. 11 and 12 in Table V). A third item (item no. 10) for competitiveness was borrowed from Lumpkin and Dess (1996). Academic colleagues were then asked by the researcher to translate the EO items from English to Italian. A back-translation to English was then performed by a professional proofreader to ensure correctness. The Italian items translation is presented in Table VI.

The multidimensional EO constructs were adopted in this empirical analysis.

The reliability of each dimension was estimated by Cronbach’s α test. Cronbach’s α values were 0.68 for innovativeness, 0.58 for proactiveness, 0.79 for risk-taking, 0.64 for competitiveness and 0.89 for autonomy. Apart from proactiveness, which was close to 0.60, all dimensions exceeded the acceptable level of 0.60 (Nunnally, 1967). As shown in Table VI, including the third item in the proactiveness subscale reduces reliability, we therefore removed item no. 6(4). Then, Cronbach’s α coefficient for proactiveness was raised to the acceptable level of 0.69. Table VI shows Cronbach’s α coefficients for the five EO dimensions and also their variations when single items were deleted.

In the analyzed Sardinian sample, activities related to all five EO dimensions were performed in various degrees. The sampled tourism firms focused most on proactiveness and least on autonomy, the full order being as follows (mean value in brackets): proactiveness (4.79), competitiveness (4.28), risk-taking (3.32), innovativeness (3.07) and autonomy (2.96) as shown in Table VII.

The objective of this study is to test the impact of EO dimensions on tourism firm performance. Hence, in the statistical analyses, firm performance was regressed based on the EO measures. A bivariate analysis (Pearson correlation) was first carried out to assess the existence of a statistically significant relationship between these variables. The results are reported in Table VII.

All the considered variables seem to be positively correlated with a high level of statistical significance. These results suggest that at least the direction of the relationship between these variables and performance is, as expected, positive.

A multivariate test was then performed by means of ordered logit regressions, since the dependent variable is measured on an ordinal scale (Wooldridge, 2002, Chapter 15). This second examination aimed at investigating the contribution of each EO dimension to explain performance, after controlling for the effect of the others. As shown in Table VII, the EO dimensions all correlated with each other, so excluding one of the variables from the analysis may lead to wrong statistical inference. For instance, assume that autonomy is the true determinant of profit satisfaction but we leave this variable out of the analysis, then the other dimensions included as regressors will certainly be correlated with the error term of the model, thus inducing bias in the estimates for the violation of the exogeneity assumptions on which the model is built.

However, using similar arguments as those presented above, one may also maintain that the model presented in Table VIII, column 1, confounds the effects of EO dimensions with other characteristics of the decision makers (e.g. one may presume that those who have more
### Table VI.
**Items, Italian translation and reliability coefficients (Cronbach's coefficient \( \alpha \))**

<table>
<thead>
<tr>
<th>Variables</th>
<th>( n )</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovativeness</td>
<td>224</td>
<td>3.07</td>
<td>1.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proactiveness</td>
<td>224</td>
<td>4.79</td>
<td>1.40</td>
<td>0.328**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk-taking</td>
<td>224</td>
<td>3.32</td>
<td>1.37</td>
<td>0.357**</td>
<td>0.427**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competitiveness</td>
<td>224</td>
<td>4.28</td>
<td>1.30</td>
<td>0.323**</td>
<td>0.237**</td>
<td>0.343**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autonomy</td>
<td>224</td>
<td>2.96</td>
<td>1.54</td>
<td>0.265**</td>
<td>0.144*</td>
<td>0.338**</td>
<td>0.262**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales</td>
<td>224</td>
<td>3.50</td>
<td>1.61</td>
<td>0.310**</td>
<td>0.281**</td>
<td>0.236**</td>
<td>0.244**</td>
<td>0.182**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Profit</td>
<td>224</td>
<td>3.38</td>
<td>1.61</td>
<td>0.314**</td>
<td>0.311**</td>
<td>0.272**</td>
<td>0.280**</td>
<td>0.263**</td>
<td>0.866**</td>
<td>1</td>
</tr>
</tbody>
</table>

**Note:** All items were scored from 1 to 7

### Table VII.
**Pearson correlations between variables and descriptive statistics**

<table>
<thead>
<tr>
<th>Variables</th>
<th>( n )</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovativeness</td>
<td>224</td>
<td>3.07</td>
<td>1.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proactiveness</td>
<td>224</td>
<td>4.79</td>
<td>1.40</td>
<td>0.328**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk-taking</td>
<td>224</td>
<td>3.32</td>
<td>1.37</td>
<td>0.357**</td>
<td>0.427**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competitiveness</td>
<td>224</td>
<td>4.28</td>
<td>1.30</td>
<td>0.323**</td>
<td>0.237**</td>
<td>0.343**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autonomy</td>
<td>224</td>
<td>2.96</td>
<td>1.54</td>
<td>0.265**</td>
<td>0.144*</td>
<td>0.338**</td>
<td>0.262**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales</td>
<td>224</td>
<td>3.50</td>
<td>1.61</td>
<td>0.310**</td>
<td>0.281**</td>
<td>0.236**</td>
<td>0.244**</td>
<td>0.182**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Profit</td>
<td>224</td>
<td>3.38</td>
<td>1.61</td>
<td>0.314**</td>
<td>0.311**</td>
<td>0.272**</td>
<td>0.280**</td>
<td>0.263**</td>
<td>0.866**</td>
<td>1</td>
</tr>
</tbody>
</table>

**Notes:** *\( p < 0.05 \); **\( p < 0.01 \)
experience in the business may also be those who are more entrepreneurially oriented or with the characteristics of the structure (e.g. suppose that more entrepreneurially oriented managers work for bigger structures and that the dimension of the structure is the real determinant of profits and sales). Therefore, in the multivariate analyses reported in columns 2-4, a number of control variables related to some businesses’ characteristics and human capital measures and other demographic characteristics of the decision maker were included.

Results

Tables VIII and IX present the results of the above depicted regression analyses. The results of the regression of satisfaction for sales as a dependent variable are shown in Table VIII where in column 1 all EO dimensions are considered together as independent variables.

In the multivariate analyses reported in column 2 of Table VIII, a number of control variables related to some businesses’ characteristics were included. Due to the different types of accommodation included in the sample, accommodation size was quantified by the number of employees, instead of the number of rooms and beds. Having camping accommodation in the sample led us to not adopt the number of rooms or beds. Facilities offered by the accommodation were included by using dummy variables for restaurant, swimming pool and practice sports (i.e. whether the guests can practice sports in the accommodation or not). Furthermore, the variable family business was included, asking whether or not the firm was a

<table>
<thead>
<tr>
<th>Model (1)</th>
<th>Model (2)</th>
<th>Model (3)</th>
<th>Model (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent variables</strong></td>
<td><strong>Entrepreneurial orientation dimensions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovativeness</td>
<td>0.268** (0.104)</td>
<td>0.275*** (0.105)</td>
<td>0.306*** (0.108)</td>
</tr>
<tr>
<td>Proactiveness</td>
<td>0.266*** (0.100)</td>
<td>0.298*** (0.104)</td>
<td>0.330*** (0.106)</td>
</tr>
<tr>
<td>Risk-taking</td>
<td>0.006 (0.102)</td>
<td>−0.032 (0.105)</td>
<td>−0.033 (0.107)</td>
</tr>
<tr>
<td>Competitiveness</td>
<td>0.189 (0.104)</td>
<td>0.126 (0.109)</td>
<td>0.115 (0.111)</td>
</tr>
<tr>
<td>Autonomy</td>
<td>0.087 (0.085)</td>
<td>0.094 (0.084)</td>
<td>0.093 (0.086)</td>
</tr>
<tr>
<td><strong>Accommodation characteristics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>0.016** (0.007)</td>
<td>0.017** (0.007)</td>
<td>0.014** (0.007)</td>
</tr>
<tr>
<td>Restaurant</td>
<td>−0.483 (0.318)</td>
<td>−0.374 (0.327)</td>
<td>−0.325 (0.329)</td>
</tr>
<tr>
<td>Swimming</td>
<td>0.215 (0.270)</td>
<td>0.295 (0.281)</td>
<td>0.196 (0.275)</td>
</tr>
<tr>
<td>Practice sports</td>
<td>−0.109 (0.275)</td>
<td>−0.183 (0.286)</td>
<td>−0.128 (0.278)</td>
</tr>
<tr>
<td>Family business</td>
<td>0.188 (0.252)</td>
<td>0.238 (0.256)</td>
<td>0.275 (0.258)</td>
</tr>
<tr>
<td><strong>Decision maker profile</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>−0.531** (0.262)</td>
<td>−0.555** (0.261)</td>
<td></td>
</tr>
<tr>
<td><strong>Educational status</strong></td>
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</tr>
<tr>
<td>University degree</td>
<td>−0.037 (0.282)</td>
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<tr>
<td>Master’s degree or higher</td>
<td>0.114 (0.431)</td>
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<tr>
<td>Compulsory education</td>
<td>0.407 (0.527)</td>
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<tr>
<td>High school REF.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>−0.024* (0.014)</td>
<td>−0.021 (0.014)</td>
<td></td>
</tr>
<tr>
<td>Exp</td>
<td>0.000 (0.000)</td>
<td>0.000* (0.000)</td>
<td></td>
</tr>
<tr>
<td>Exp2</td>
<td>−0.017 (0.013)</td>
<td>−0.021* (0.013)</td>
<td></td>
</tr>
<tr>
<td><strong>Educational background</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td>1.134*** (0.331)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tourism</td>
<td>0.847*** (0.308)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other REF.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n</td>
<td>224</td>
<td>224</td>
<td>224</td>
</tr>
<tr>
<td>χ²</td>
<td>35.930 (0.000)</td>
<td>45.562 (0.000)</td>
<td>57.408 (0.000)</td>
</tr>
</tbody>
</table>

Notes: Standard errors in parentheses. *p < 0.10; **p < 0.05; ***p < 0.01
family business (the associated dummy is equal to one when the firm is a family business). In model 3 of Table VIII, human capital measures and other demographic characteristics of the decision maker are included[5]. These individual-level controls are as follows: age, years of experience, gender and educational level. This last characteristic is measured by the inclusion of a dummy variable for each possible level (the high school level of education is used as the category of reference). Since previous studies suggest that the relationship between experience and performance may not be linear, the square of experience was also included in the model (Evans and Leighton, 1989; Hamilton, 2000). To avoid collinearity, the variable “years of experience” was demeaned, and the square of this demeaned variable was calculated; then, the demeaned variable and its square were included in the model. Finally, in model 4 of Table VIII, the educational background was included. In particular, a dummy was created equal to one if the respondent had managerial or tourism education. In Table IX, the same types of analyses are replicated but using profit as the dependent variable instead of sales.

The use of sales as the dependent variable yields a positive and highly statistically significant relationship with proactiveness and innovativeness (1 percent level). A positive effect is found also for competitiveness, but this result is only weakly statistically significant at the 10 percent level (column 1 in Table VIII). When businesses’ characteristics are included in the regression as control variables (column 2, Table VIII), innovativeness and proactiveness are still highly statistically significant ($p < 0.01$), while the weak statistical significance of competitiveness does not survive the inclusion of these control variables.

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Model (1)</th>
<th>Model (2)</th>
<th>Model (3)</th>
<th>Model (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovativeness</td>
<td>0.222**</td>
<td>0.216**</td>
<td>0.239**</td>
<td>0.232**</td>
</tr>
<tr>
<td>Proactiveness</td>
<td>0.278***</td>
<td>0.303***</td>
<td>0.347***</td>
<td>0.370***</td>
</tr>
<tr>
<td>Risk-taking</td>
<td>0.020 (1)</td>
<td>−0.015 (1)</td>
<td>−0.041 (1)</td>
<td>−0.035 (1)</td>
</tr>
<tr>
<td>Competitiveness</td>
<td>0.227**</td>
<td>0.181*</td>
<td>0.183 (1)</td>
<td>0.094 (1)</td>
</tr>
<tr>
<td>Autonomy</td>
<td>0.175**</td>
<td>0.195**</td>
<td>0.199**</td>
<td>0.225***</td>
</tr>
<tr>
<td>Accommodation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>characteristics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>0.018***</td>
<td>0.019***</td>
<td>0.017**</td>
<td></td>
</tr>
<tr>
<td>Restaurant</td>
<td>−0.301 (3)</td>
<td>−0.205 (3)</td>
<td>−0.172 (3)</td>
<td></td>
</tr>
<tr>
<td>Swimming</td>
<td>0.253 (2)</td>
<td>0.241 (2)</td>
<td>0.279 (2)</td>
<td></td>
</tr>
<tr>
<td>Practice sports</td>
<td>−0.168 (2)</td>
<td>−0.181 (2)</td>
<td>−0.193 (2)</td>
<td></td>
</tr>
<tr>
<td>Family business</td>
<td>0.291 (251)</td>
<td>0.345 (256)</td>
<td>0.333 (258)</td>
<td></td>
</tr>
<tr>
<td>Decision maker profile</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>−0.680**</td>
<td>−0.676**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational status</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>University degree</td>
<td>−0.021 (287)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master’s degree or higher</td>
<td>−0.080 (439)</td>
<td></td>
<td></td>
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<tr>
<td>Compulsory education</td>
<td>0.471 (0.536)</td>
<td></td>
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<td></td>
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<tr>
<td>High school REF.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>−0.028**</td>
<td>−0.024*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exp</td>
<td>0.000 (0)</td>
<td>0.000 (0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational background</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td>0.913***</td>
<td>0.885***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tourism</td>
<td>0.895***</td>
<td>0.314</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other REF.</td>
<td></td>
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</tr>
</tbody>
</table>

**Table IX.** Ordered logit models for profit

<table>
<thead>
<tr>
<th>$n_2$</th>
<th>224</th>
<th>224</th>
<th>224</th>
<th>224</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\chi^2$</td>
<td>44.558 (0.000)</td>
<td>56.298 (0.000)</td>
<td>69.591 (0.000)</td>
<td>78.911 (0.000)</td>
</tr>
</tbody>
</table>

**Notes:** Standard errors in parentheses. *$p < 0.10$; **$p < 0.05$; ***$p < 0.01$
It is worth noting that accommodation size exhibits a positive statistically significant relationship with sales at the 5 percent level. So, the larger the size of the business, the higher the satisfaction with sales performance. Innovativeness and proactiveness also continue to exert a positive statistical influence on sales when controls for the human capital of the managers are included (column 3, Table VIII). It is observed that being female (1 percent level of statistical significance) and having a higher age (5 percent level of statistical significance) are both negatively related to perceived sales satisfaction. These latter observations mean that female and/or older managers are less satisfied with revenue growth during the three years. Finally, when the controls for the managerial and tourism educational background are inserted, innovativeness and proactiveness continue to be positively related to sales satisfaction, and these relations are still highly statistically significant ($p < 0.1$). Education in management and tourism shows a significant positive relationship with perceived sales at the 1 percent significance level. In other words, respondents with a specific education in managerial and tourism disciplines seem more satisfied with the obtained revenues. Furthermore, the non-linear relationship between experience and performance seems to be confirmed by the empirical results (even if the relationship is significant only at the 10 percent level). In particular, the results suggest that satisfaction about sales grows as the years of experience increase. Finally, looking at the magnitude of the coefficients for those EO dimensions that are statistically significant, it is observed that the largest coefficient is that associated with proactiveness, followed by that associated with innovativeness.

When profit is the dependent variable, all the EO dimensions with the exception of risk-taking are positively and statistically significantly related to performance (see Table IX, column 1). After the inclusion of businesses’ characteristics in the econometric model, presented in column 2 in Table IX, the relationship between EO dimensions and performance remains highly statistically significant for three variables (innovativeness, autonomy, proactiveness) while competitiveness becomes only weakly significant (10 percent level). As in the case of sales, the accommodation size exerts a positive statistically significant effect on profit ($p < 0.01$). The other controls for objective characteristics of the firm turn out not to be significant predictors of perceived performance.

This analysis adopted subjective performance assessed by the mean of business managers’ satisfaction with sales and profit, and several studies have supported the reliability of such measures (Dess and Robinson, 1984; Wall et al., 2004; Rauch et al., 2009). In particular, Fadda (2014) used data from a similar context to show that subjective and objective measures of performance are strongly positively related.

In model 3 of Table IX, human capital variables are added and the significance of EO dimensions survives this inclusion. Looking at the results associated with these control variables, also in this case, being a female and being older exhibit a negative impact on profits. It seems that female and/or older managers are more demanding about business economic outcomes, leading to their becoming more unsatisfied. Finally, in column 4 in Table IX, all the results associated with EO dimensions are confirmed. As in Table VIII, having a managerial and tourism education positively influences perceived profit ($p < 0.01$).

Looking at the magnitude of the coefficients for those EO dimensions that exhibit a significant relationship with profits, it turns out that the largest coefficient is that associated with proactiveness, followed by those associated with innovativeness and autonomy, respectively. With respect to the results obtained for sales, it seems that satisfaction with profit is more reactive to EO dimensions. This evidence could be interpreted in favor of the idea that EO impacts not only on the ability of a firm “to sell” its products, but more generally to the ability to generate value. In other words, more entrepreneurially oriented firms may be more able to put into practice more efficient management solutions that enlarge profits (and the associated satisfaction), and not only to ideate strategy to reach new clients.
Conclusion and further research

The aim of this research was to study the impact of each EO dimension on tourism firm performance. As noted by Miller (2011), single EO dimensions may be practiced to different extents within firms depending on the type of company and the sector in which they operate. Each sector has its own features and is characterized by different forces in which entrepreneurship should heterogeneously emerge and differently produces successful results. Keeping this in mind, this paper has tried to establish which EO dimension exerts the strongest impact on the performance of tourism firms in the Sardinian accommodation sector. To this end, a survey was carried out in the accommodation sector in Sardinia in 2012.

Entrepreneurial attitudes among the accommodation sector are differently presented. Proactiveness and competitiveness are higher than risk-taking, innovativeness and autonomy. Proactiveness and innovativeness were found to be positively related to both performance measures considered in this work (i.e. sales and profit). Autonomy seems to exert a significant positive effect only on profit. Therefore, a proactive firm in the accommodation sector, i.e. a firm that adopts an active orientation toward the outside environment (e.g. advancing customers’ needs and tastes, introducing new products or services and initiating actions that competitors will follow), will achieve a better performance with regard to sales and profit. The results associated with innovativeness indicate that changing products and services as well as introducing new ones has an impact on potential customers and on their consumption, and this ultimately produces a positive effect on firms’ sales as well as on profit. Moreover, the autonomy dimension was found to be positively related to profit. This suggests that supporting the initiative of employees to implement new ideas and to act independently could lead to the development of procedures or activities that seem to improve firm performance. Another interesting result is that the risk-taking dimension, characterized by implementing risky investments and business initiatives whose results are highly uncertain, was not found to play a significant role in determining firms’ performance. This result is however not surprising. Several empirical works (Blanchflower and Oswald, 1998; Blanchflower, 2000; Blanchflower et al., 2001) have shown that entrepreneurial activity is characterized by high failure rates and low average returns, but at the same time by high job satisfaction. One explanation proposed by Benz and Frey (2003) is that individuals attach value to some non-pecuniary characteristic of entrepreneurship. Therefore, it is possible that the love of risk may represent a non-pecuniary benefit which induces entrepreneurs to be relatively more willing to forgo income and to bear costs included through increased risk levels, in order to engage in business ventures.

Similarly, competitiveness did not turn out to significantly influence either sales or profit. Thus, imitating and monitoring competitors’ activities will not repay tourism businesses in terms of better performance. This may depend on the peculiar characteristics of the sector under investigation, which could, in principle, make this type of strategy difficult. Every accommodation has its own peculiarities (e.g. geographical position, amenities, size, etc.), so even if a manager tries, for instance, to adapt a firm’s prices to those of a competitor, this strategy may not impact sales, as people may continue to choose the accommodation because it is located in a more enjoyable location.

The study advances entrepreneurial knowledge in the tourism sector and in particular the accommodation industry, suggesting educational and managerial implications for managers of the sector. In fact, being entrepreneurial could refer to different meanings and activities, which could vary from context to context. The analysis shows the most widespread entrepreneurial attitudes in the accommodation sector of a renowned touristic destination as well as their impacts on added value. According to these results, entrepreneurs in the tourism sector (at least those operating in the Sardinian accommodation sector) should be encouraged to adopt an innovative, autonomous and proactive approach in managing their firms. Therefore, the overall recommendation of this paper is that accommodation firms should
focus more on implementing entrepreneurial activities characterized by introducing innovative products and services, on anticipating market trends, and on the development of an organizational environment capable of encouraging new ideas. A further implication of this study is that managers of accommodation should carefully consider risk-taking decisions as well as monitoring activities toward competitors that may not add value.

Furthermore, having studied management and tourism disciplines within accommodation, a managerial background turns out to be a relevant factor influencing satisfaction with sales and profit. Thus, education in tourism and businesses should be encouraged among current managers in the accommodation sector.

Another finding in this paper is that being a family business seems to be irrelevant in terms of achieving better performance. Being a family business was included as a control variable in the regression analyses, as previous studies have argued that family businesses perform better than non-family ones (Dyer, 2006; Martinez et al., 2007). The results obtained in the Sardinian accommodation sector do not confirm this evidence. However, Hallak et al. (2012) were not able to confirm the family business effect either, on the basis of a study carried out on a sample of small and medium-sized tourism firms in Southern Australia. A possible explanation of this study’s results may depend on the composition of the sample. Thus, given that family-owned accommodation are on average smaller than the non-family ones, the fact that being a family business does not influence performance may be likely associated with the possibly lower managerial skills in the smaller firms in this particular sector.

Finally, considering that EO research has been overlooked in the country of Italy, this study’s contribution is also providing evidence from an area that has received minimal attention to date.

This research presents some limitations that must be considered. First, it was conducted in the Sardinian accommodation sector and therefore results are limited to this context. Second, self-reported data were used to measure firm performance. In future research, this study could be replicated using objective firm performance, e.g. incorporating firms whose financial documents are publicly available. Furthermore, self-reported performance was measured by interviewer satisfaction about sales and profit achieved during the three years 2009-2011. The period analyzed was characterized by a huge decrease in tourist arrivals in Sardinia.

Given that family businesses are widespread in the tourism and hospitality industry, future research could investigate this characteristic in relation to the theme of EO and its dimensions.

Due to contextual limitations, a future line of research would be a replication of the same analysis in similar touristic destinations. Furthermore, this survey could also be replicated incorporating other industries in the tourism sector and other countries. It would also be interesting to use a longitudinal study design or other statistical methods.

Notes
1. It is worth considering that one of the first tourism initiatives was the development of Costa Smeralda on the northeast coast, undertaken by foreign entrepreneurs totally disconnected from Sardinian traditions and culture.
2. Although changed items were found to be sufficient, the questionnaire was then re-tested to ensure its reliability.
3. It can be argued that the difference between an entrepreneur and a manager is substantial. However, this study aims to analyze the relationship between how much a firm is managed in accordance with the EO dimensions and its performance. Therefore, the underlying assumption is that the person identified as the decision maker in a company is also the one who effectively determines its managerial orientation.
4. From a theoretical point of view, item no. 6 seems to express the competitor attitude instead of the proactiveness one (see Table AI). This impression is then confirmed by the Cronbach coefficient

Effects of EO dimensions
that suggests deleting item no. 6 with the aim to increase the consistency of proactiveness measurements used.

5. These variables have been included in the regression to avoid a possible confounding effect. Indeed, if human capital is able to influence firm performance and at the same time it is correlated with entrepreneurial orientation, its exclusion may cause a bias in the estimation coefficients tied to the EO dimensions.

References


Further reading

Appendix

<table>
<thead>
<tr>
<th>Q: In general, my firm favors [...]</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A strong emphasis on the marketing of tried and true products or services</td>
<td>A strong emphasis on R&amp;D technological leadership, and innovations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. No new lines of products or services</td>
<td>Very many new lines of products or services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Changes in product or service lines have been mostly of a minor nature</td>
<td>Changes in product or service lines have usually been quite dramatic</td>
<td></td>
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<td></td>
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<td></td>
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</table>

<table>
<thead>
<tr>
<th>Q: How many new lines of products or services has your firm marketed in the past 3 years?</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
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<tbody>
<tr>
<td>1. 0 new lines of products or services</td>
<td>2. Very many new lines of products or services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Changes in product or service lines have usually been quite dramatic</td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q: In dealing with its competitors, my firm [...]</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Typically responds to actions which competitors initiate</td>
<td>Typically initiates actions to which competitors then respond to</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Is very seldom the first business to introduce new products/services, administrative techniques, operating technologies, etc.</td>
<td>Is very often the first business to introduce new products/services, administrative techniques, operating technologies, etc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Typically seeks to avoid competitive clashes, preferring a “live-and-let-live” posture</td>
<td>Typically adopts a very competitive, “undo-the-competitors” posture</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Q: In general, my firm has [...]</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. A strong proclivity for low-risk projects (with normal and certain rates of return)</td>
<td>A strong proclivity for high-risk projects (with chances of very high return)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Q: In general, my firm believes that [...]</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Owing to the nature of the environment, it is best to explore gradually via timid, incremental behavior</td>
<td>Owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm’s objectives</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

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<th>Q: When confronted with decision-making situations involving uncertainty, my firm [...]</th>
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<td>9. Typically adopts a cautious, “wait and see” posture in order to minimize the probability of making costly decisions</td>
<td>Typically adopts a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities</td>
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<th>Q: In dealing with competitors, my firm [...]</th>
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<td>10. Does not monitor the actions of the competitors at all</td>
<td>Intensively monitors the actions of the competitors very closely</td>
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<td>11. Is not highly responsive to competitors’ strategies</td>
<td>Typically adopts a head-to-head confrontational strategy</td>
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<td>12. Typically uses conventional methods of competing</td>
<td>Is willing to adopt unconventional methods of competing</td>
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<th>Q: When confronted with decision making under uncertainty, my firm [...]</th>
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<td>13. Discourages the employees from acting independently without previously consulting the owners</td>
<td>Typically encourages the employees to act independently without previously consulting the owners</td>
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<td>14. Discourages the employees from making key strategic decisions without previously consulting the owners</td>
<td>Typically encourages the employees to make key strategic decisions without previously consulting the owners</td>
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<td>15. Discourages the employees from implementing key programs without previously consulting the owners</td>
<td>Typically encourages the employees to implement key programs without previously consulting the owners</td>
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Notes: There are five EO dimensions: innovativeness (items 1-3), proactiveness (items 4-6), risk-taking (items 7-9), competitiveness (items 10-12) and autonomy (items 13-15)


Table AI. The 15 questionnaire items measuring entrepreneurial orientation
About the author
Nicoletta Fadda is an Assistant Professor in Business Administration at the Department of Economics and Business, University of Sassari from 2015. In 2013, she completed a PhD Degree in Business Administration from the University of Pisa. In 2012, she was exchange PhD student at the University of Southern Denmark. Her research interests are focused on strategic management and in particular on entrepreneurship and its impact on firms’ performance. She also works on performance management in public sector and on governance networks of tourism destinations. Nicoletta Fadda can be contacted at: nfadda@uniss.it
Transnational entrepreneurship, social networks, and institutional distance

Toward a theoretical framework

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Elzotbek Rustambekov
Bryant University, Smithfield, Rhode Island, USA
Thomas Weber
University of Southern Indiana, Evansville, Indiana, USA, and
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Lone Star College, Tomball, Texas, USA

Abstract
Purpose – Transnational entrepreneurship can be considered a new stream of research where migrant entrepreneurship and international business research fields intersect. The purpose of this paper is to offer a theoretical framework to address the following research question: How do transnational entrepreneurs (TEs) develop their competitive advantage to succeed in a global market?

Design/methodology/approach – Based on the strategic entrepreneurship approach and dynamic capability perspective, this paper suggests a theoretical framework to extend the understanding on how TEs may develop their competitive advantage to succeed in a global market.

Findings – The suggested theoretical framework exhibits how the social ties of TEs affects their firm performance through the mediating effect of a bundle of two organizational processes (opportunity sensing and opportunity seizing) and the moderating effect of institutional distance between countries of origin and residence.

Practical implications – TEs should not solely focus on their ethnic social ties. That is why this paper suggests that ethnic ties in the country of origin and the country of residence (COR) may lead to higher firm performance only if systematically used alongside nonethnic ties in the COR. Furthermore, it is crucial for TEs to understand the importance of dynamic capabilities in developing and sustaining their competitive advantage.

Originality/value – Based on the strategic entrepreneurship approach, this paper suggests a social tie-based model of the dynamic capability to address the theoretical void in the transnational entrepreneurship literature. The linkage between social tie and performance which has been in a black box is examined in terms of how strong and weak social ties may affect different underlying processes of TEs’ dynamic capabilities differently. In contrast to the common conceptualization of institutional distance as a negative moderator in international business literature, institutional distance is theorized as a positive moderator in the suggested theoretical model of transnational entrepreneurship.

Keywords Dynamic capability, Institutional distance, Social networks, Transnational entrepreneurship, Immigrant entrepreneur

Paper type Research paper
Introduction

In the USA, immigrants make up 13 percent of the population; however, immigrant-owned businesses account for 28 percent of main street businesses (Kallick, 2015), generate over $775 billion in revenue, and employ one out of every ten workers (Kallick, 2012). In the 50 largest metropolitan areas of the USA, immigrants accounted for 48 percent of overall growth in business ownership between 2000 and 2013 (Kallick, 2015). A recent empirical article reports that close to 10 percent of immigrant entrepreneurs in the USA are involved in transnational economic activities; however, this figure is approximately 5 percent for nonimmigrant entrepreneurs (Wang and Liu, 2015).

Immigrants’ economic effects on the development of their country of residence (COR) and country of origin (COO) have been recognized in the literature through remittances, homeland direct investment, and return migration; however, transnational entrepreneurship, which simultaneously contributes to both the COO and the COR, is less studied (Terjesen et al., 2016). Transnational entrepreneurs (TEs) are “individuals that migrate from one country to another, concurrently maintaining business related linkages with their former country of origin, and currently adopted countries and communities” (Drori et al., 2009, p. 1001). For example, some Chinese Canadians have established production in China and imported manufactured goods to Canada and, at the same time, exported North American merchandise to Asia (Wong and Ng, 2002). Such TEs benefit from their dual embeddedness (in Asian and North American cultures) and their familiarity with laws and the economic environment in both their COO and their COR.

This paper strives to offer a theoretical framework to address the following research question:

RQ1. How do TEs develop their competitive advantage to succeed in a global market?

Although both immigrant entrepreneurship literature (e.g. Portes et al., 2002) and international business literature (e.g. Buckley et al., 2002) emphasize the importance of TEs, the literature lacks a theoretical framework explaining how TEs develop competitive advantages in their new ventures to succeed in a globally competitive environment. The majority of scholarly studies of transnational entrepreneurship “has examined the phenomenon post hoc, exploring the social characteristics and business activities” of TEs (Riddle and Brinkerhoff, 2011, p. 400). Lu et al. (2010, p. 420) pointed out that “despite the documented relationship between resources and international performance, little is known about how entrepreneurial firms can capitalize on those resources that relate to distinctive capabilities to achieve superior international performance.”

In order to address this gap in the literature, this paper adopts the strategic entrepreneurship approach (Ireland et al., 2003) to better understand how TEs develop their competitive advantage to succeed in a global market. The strategic entrepreneurship approach is defined as “the integration of entrepreneurial (i.e. opportunity seeking) and strategic (i.e. advantage seeking) perspectives in developing and taking actions designed to create wealth” (Hitt et al., 2001, p. 481). Based on the strategic entrepreneurship approach (Ireland et al., 2003), this paper employs the dynamic capability perspective (Teece et al., 1997; Teece, 2007) and relational theory of social networks (Granovetter, 1973) to suggest a theoretical framework which integrates the currently fragmented transnational entrepreneurship literature.

This paper is a response to several recent calls to develop a theoretical framework to examine transnational entrepreneurship as a new phenomenon (e.g. Brzozowski et al., 2017; Drori et al., 2009; Sequeira et al., 2009). In a recent literature review, Terjesen et al. (2016) reported that despite “the high prevalence rate of transnational entrepreneurship […] the phenomenon is understudied” (p. 307). This paper offers a theoretical framework that explains how TEs may recognize opportunities and take advantage of their exceptional social networks in both their COO and COR (which may be institutionally very different). The theoretical framework suggests how the ethnic and nonethnic ties of TEs affect firm
performance through the mediating effects of TEs’ dynamic capabilities (Teece, 2007; Winter, 2003) and the moderating effect of institutional distance between the COO and the COR.

The contribution of this paper is threefold. First, based on the strategic entrepreneurship approach, this paper suggests a social tie-based model of the dynamic capability to address the theoretical void in the transnational entrepreneurship literature. Second, the linkage between social tie and performance which has been in a black box (Lahiri et al., 2012; Wu, 2007) is examined in terms of how strong and weak social ties (Granovetter, 1973) may affect different underlying processes of TEs’ dynamic capabilities differently. Third, this paper is a response to recent calls for including contextual factors (e.g. institutional distance) in understanding entrepreneurial activities (Yeung, 2002; Zahra and Wright, 2011). In contrast to the common conceptualization of institutional distance as a negative moderator in international business literature (Kostova and Zaheer, 1999; Xu and Shenkar, 2002), institutional distance is theorized as a positive moderator in the suggested theoretical model of transnational entrepreneurship.

The remainder of this paper is structured as follows. The following section provides a brief literature review on transnational entrepreneurship. In the third section, strategic entrepreneurship is discussed as an appropriate approach to address how TEs develop their competitive advantage to succeed in a global market. The paper concludes with managerial and policy implications as well as suggestions for future research directions.

Transnational entrepreneurship
The prevalence of inexpensive communication methods (e.g. e-mail, fax, the internet, and telephone services) and affordable transportation opportunities (e.g. air travel) are all significant driving forces of transnational entrepreneurship (Drori et al., 2009). One survey study shows that approximately one out of every five foreign-born professionals working in Silicon Valley is involved in start-ups or venture funds in their COO (Saxenian, 2002). Immigrants’ transnational economic activities such as sending remittances to the COO and direct investment in the COO (Vaaler, 2011) have been examined in recent years; however, little is known about how the process of transnational entrepreneurship works (Dimitratos et al., 2016) and what, if any, the competitive advantages of TEs are (Sequeira et al., 2009; Yeung, 2009). Therefore, this paper focuses on transnational entrepreneurship.

The research on transnational entrepreneurship was originated by immigration scholars who defined TEs as a subset of migrant entrepreneurs “who travel abroad at least twice a year for business,” and their business success “depends on regular contact with their country of origin” (Portes et al., 2002, p. 284). Itzigsohn et al. (1999), Kyle (1999), and Landolt et al. (1999) are among the early scholars who discussed transnational entrepreneurship as a new research stream in the migrant entrepreneurship literature; however, most of the research on TEs in the late 1990s was limited to case studies (Portes et al., 2002). In the last decade, entrepreneurship scholars also developed an interest in studying TEs (Ilhan-Nas et al., 2011). Drori et al. (2009) discussed similarities and differences between transnational entrepreneurship and other research areas such as international entrepreneurship (McDougall et al., 1994), returnee entrepreneurship (e.g. Wright et al., 2008), and ethnic entrepreneurship (e.g. Morris et al., 2002; Poorsoltan, 2007).

TEs’ ethnic advantage-performance linkage black box
The transnational entrepreneurship literature is still in its infancy. Most of the studies in the transnational entrepreneurship literature have focused on ethnic ties[1] (e.g. Chand and Ghorbani, 2011) and ethnic market knowledge (e.g. Shinnar et al., 2011) as important success factors for TEs but the extant literature fails to provide theoretical insight on how these resources may affect firm performance. In particular, the process of TEs’ competitive advantage creation is still a mystery (Lin and Tao, 2012). In other words, the literature
currently lacks a theoretical model describing how TEs develop competitive advantages in their new ventures and succeed.

The extant fragmented literature implies a direct link between TEs’ ethnic advantage (in terms of market knowledge and ethnic ties) and TEs’ firm performance. “Ethnic advantage” refers to the assumption that TEs “possess relative knowledge and social capital advantages” compared to other competitors (Nielsen and Riddle, 2007, p. 5). In other words, the concept of ethnic advantage is associated with the belief that TEs face less risk because they better understand market preferences and the business environment in their COO as compared to other foreign competitors (Gillespie et al., 1999). Sequeira et al. (2009, p. 1023) argue that TEs “are unique in that they are socially embedded in both their home and host environment [… ] [a condition that] aid[s] these entrepreneurs in opportunity recognition, start-up, and maintenance of new ventures.” However, the empirical results of such a direct linkage between ethnic advantage and firm performance remain mixed. While some studies report the importance of ethnic ties in TEs’ success (Chand and Ghorbani, 2011), other studies found no significant relationship between ethnic ties and firm performance (Chan and Cheung, 1985; Heilbrunn and Kushnirovich, 2007; Keele, 1984; Zimmer and Aldrich, 1987), and other studies reported a negative effect (Fregetto, 2004) and called ethnic ties sticky (difficult to move beyond) which hinder a firm’s potential to expand its social network capital beyond the ethnic community (Prashantham and Dhanaraj, 2010). Portes and Sensenbrenner (1993) discussed potential negative effects of ethnic ties which may pressure individuals to remain within their ethnic groups. Consequently, the immigrant entrepreneur may not develop social ties with members of the dominant market in the COR. In other words, the immigrant entrepreneurs under such pressure are unlikely to expand beyond their ethnic community and will miss new ideas that are prevalent outside of their closed ethnic network (Gomez et al., 2015; Perera et al., 2013). It is also important to note that not all immigrants with the same level of market knowledge and the same level of density and strength of social ties are involved in transnational entrepreneurship and if they are, not all of them exhibit a sustainable, successful outcome (Zafarullah et al., 1997).

Even in those migrant entrepreneurship studies which emphasize the important effect of social networks and ethnic ties on firm performance (e.g. Kalnins and Chung, 2006; Siqueira, 2007), we still know little about the process through which social ties affect performance. In fact there are “very few papers on the genesis of ties and even fewer that consider the role of networks in the founding of new ventures” (Aldrich and Kim, 2007, p. 2). In other words, the resource-performance relationship remains in a black box (As shown in Figure 1), and the literature lacks a rigorous theoretical explanation of this process (Yang et al., 2011).

Several researchers questioned the assumption of such a direct linkage between ethnic resources and firm performance (e.g. Lahiri et al., 2012; Wu, 2007) and called for better

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Figure 1.
Transnational entrepreneurship literature black box
explanations of the transnational entrepreneurship process and how TEs develop their competitive advantage essential for firm performance (Drori et al., 2009). This paper argues that ethnic resources are necessary but not sufficient factors in explaining the TEs’ true competitive advantage and firm performance.

A strategic entrepreneurship approach

In order to address the aforementioned black box, this paper employs the strategic entrepreneurship approach (Ireland et al., 2003) which calls for the integration of opportunity seeking behavior theorized in the entrepreneurship field and competitive advantage seeking behavior which is at the core of strategic management. The strategic entrepreneurship approach argues that both opportunity seeking and advantage seeking are simultaneously required to develop competitive advantage resulting in firm performance. The strategic entrepreneurship approach also suggests that particular types of resources, such as market information, social networks, and entrepreneurs’ characteristics (e.g. ethnicity and experience), are necessary but insufficient factors for wealth creation and success.

Based on the strategic entrepreneurship approach, this paper suggests that the dynamic capability perspective is a fruitful theoretical framework to examine transnational entrepreneurship and addresses the question of why some TEs succeed and others (with the same level of access to market knowledge or social network privileges) fail (Zafarullah et al., 1997). The strategic entrepreneurship approach suggests that TEs’ dynamic capabilities (encompassing opportunity sensing and opportunity seizing as explained below) not the resources, per se (Adner and Helfat, 2003) drive TEs’ competitive advantage and firm performance. Based on earlier studies (e.g. Hamel and Prahalad, 1990; Nelson and Winter, 1982), Teece et al. (1997, p. 516) define a dynamic capability as “the firm’s ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments.” In addition, they argue that dynamic capabilities are difficult to imitate due to their path dependency (reliance on previous decisions, firm history, and organizational and managerial processes) as well as firm technological, financial, and social asset positions.

The dynamic capability perspective is suitable to examine TEs for three reasons. First, the dynamic capability perspective (Teece et al., 1997) was developed as an extension of the resource-based view (RBV) of the firm (Barney, 1991; Rumelt, 1984; Wernerfelt, 1984) which is used by both strategic management and entrepreneurship scholars to explain firm performance and entrepreneurial success (Ireland et al., 2003). The RBV posits that firm resources which are valuable, rare, nonsubstitutable, and costly to imitate serve as the true source of competitive advantage (Barney, 1991). Social networks are considered valuable, rare, nonsubstitutable, and costly to imitate and are potential resources for competitive advantage creation. However, the RBV has been criticized as a static perspective that is largely tautological in nature (Priem and Butler, 2001) and particularly unsuitable for a fast-changing environment (Teece et al., 1997) such as in international business (Teece, 2007). In dynamic environments, “simply examining relationships between start-up resources and performance can produce misleading conclusions when using the RBV” (Wu, 2007, p. 549). Therefore, the dynamic capability perspective may explain why TEs from the same COO that operate in the same COR experience different entrepreneurial outcomes (Yeung, 2002).

Second, several scholars in the field of entrepreneurship (e.g. Arthurs and Busenitz, 2006; Newey and Zahra, 2009) support the notion that the dynamic capability perspective is an appropriate theoretical lens in describing entrepreneurial firms and call for capability-based theoretical lenses to examine drivers of successful internationalization in entrepreneurial firms (Autio et al., 2011). Finally, several scholars in international business (e.g. Griffith and Harvey, 2001; Lu et al., 2010; Malik and Kotabe, 2009) also suggest that dynamic capabilities is a fruitful perspective to better understand how firms create
competitive advantages in an international environment. The literature suggests that dynamic capabilities may encourage and facilitate internationalization and learning in international markets (Griffith and Harvey, 2001; Sapienza et al., 2006).

Transnational entrepreneurship: a theoretical framework
Based on the strategic entrepreneurship approach, this paper suggests a social network-based model of dynamic capability development which explains how TEs may develop some organizational processes in both COO and COR to create their unique competitive advantage. TEs’ success depends on developing unique organizational dynamic capabilities which allow them to compete against established firms (Arthurs and Busenitz, 2006; Sapienza et al., 2006). Teece (2007) explains that dynamic capabilities can be disaggregated into the capacity to sense opportunities and to seize opportunities through reconfiguring the business enterprise’s intangible and tangible assets. Consistent with Winter (2003, p. 992), this paper posits dynamic capabilities are “higher level” organizational processes that extend, modify, or create “zero-level” processes. Winter (2003, p. 991) defines a zero-level process as “behavior that is learned, highly patterned, repetitious, or quasi-repetitious, founded in part in tacit knowledge.” Therefore, this paper suggests that TEs need to develop two key zero-level processes: first, the opportunity sensing organizational process to sense and shape opportunities; and second, the opportunity seizing organizational process to exploit opportunities.

Opportunity sensing
Entrepreneurial opportunities are potential situations for introducing new products or services to a target market or providing extant products and services in new ways (Eckhardt and Shane, 2003). Opportunity sensing can be considered the core of entrepreneurship (Hitt et al., 2001) because it characterizes entrepreneurs as individuals who are capable of identifying opportunities not recognized by others (Shane and Venkataraman, 2000). In particular, the international business literature emphasizes the importance of the opportunity sensing process for foreign market opportunities exploration (Lu et al., 2010; Yeoh, 2000). Market information asymmetries often provide entrepreneurial opportunities which are not evenly recognizable to everyone (Ireland et al., 2003; Moghaddam, Aidov, DuVal and Azarpahan, 2017; Shane and Venkataraman, 2000). In the context of transnational entrepreneurship, TEs have a unique advantage of recognizing special opportunities associated with their unique information and knowledge of their COO and COR which is not readily available to other competitors and thus may serve as a source of competitive advantage.

Examining the entrepreneurial activities of former USSR immigrants in the Netherlands and Israel, Van Gelderen (2007) found the ways that COO knowledge may aid TEs to recognize unique opportunities. For example, TEs may start travel agencies providing tour services to people in their COO to visit the COR or take people from the COR to explore the COO. Importing and exporting businesses of hand-made products (e.g. Persian hand-woven carpets) that may be idiosyncratic to the TEs’ COO are also another example of opportunities for TEs.

Teece (2007, p. 1323) points out that while one individual in a firm may have the “necessary cognitive and creative skills” to sense some opportunities, the more desirable approach is to “embed scanning, interpretative, and creative processes inside the enterprise itself.” In other words, he suggests that the firm will be “vulnerable” if opportunity sensing is “left to the cognitive traits of a few individuals.” Therefore, using a strategic entrepreneurship approach, this paper argues that TEs need to develop opportunity sensing processes such as internal research and development activities and customer feedback (Teece, 2007) to sense opportunities systematically and relate those to the opportunity-seizing process which in turn may lead to firm performance.
Opportunity seizing

The strategic entrepreneurship approach posits that transnational opportunity sensing is necessary but not sufficient for competitive advantage creation (Hitt et al., 2001). In addition to the opportunity sensing process development, TEs need to enhance their opportunity-seizing processes. In fact, engaging in cross-border activities "could be considered an act of opportunity seizing" which requires the development of related dynamic capabilities (Jantunen et al., 2008, p. 158). For example, the marketing process, the "capacity to formulate effective marketing mix strategies," can be considered as an opportunity seizing ability (Weerawardena et al., 2007, p. 301) which may significantly contribute to sustainable competitive advantage development (Kor and Mahoney, 2005) and thus positively affect entrepreneurial performance (Knight et al., 2004). Using Panel Study of Entrepreneurial Dynamics data, Newbert (2005, p. 67) points out that a set of gestation activities (opportunity seizing mechanisms) such as "developing a [business] model", "hiring committed employees", and "engaging in promotional efforts" significantly affect firm performance.

Consistent with the strategic entrepreneurship approach (Ireland et al., 2003), this paper considers opportunity seizing as a process of strategically managing tangible and intangible resources and leveraging organizational resources. The opportunity-seizing process includes business model development, establishing decision-making protocols, establishing control and monitoring mechanisms, and building loyalty and commitment (Teece, 2007).

In sum, the ability to access and make sense of the external knowledge and information is crucial to exploit entrepreneurial opportunities (Zahra and George, 2002). In other words, opportunity sensing when combined with advantage seeking behavior leads to growth and wealth creation (Ireland et al., 2003). Ineffective bundles of resources "lead to poorly coordinated and often chaotic attempts to create maximum value by using the firm’s capabilities" (Ireland et al., 2003, p. 979). Therefore, with the strategic entrepreneurship approach, this paper posits that in order to assure firm performance, both zero-level organizational processes of opportunity sensing and opportunity seizing are required (Teece, 2007) for the development of TEs’ dynamic capabilities and attaining subsequent firm performance. Furthermore, TEs’ transnational dynamic capability plays a key role to unravel the ethnic advantage-performance linkage black box as shown in Figure 2.
TEs’ dynamic capabilities as a mediator of social ties-performance linkage

Social networks have been recognized as an important resource for entrepreneurial firms in general (Aldrich and Kim, 2007; Jiang et al., 2012) and immigrant start-ups in particular (Chung and Whalen, 2006; Chung and Tung, 2013; Dai et al., 2011). Entrepreneurial firms have limited resources and social networks provide complementary resources essential to establish and run a new venture (Greve and Salaff, 2003).

Social networks can broadly be defined as “a web of personal connections and relationships for the purpose of securing favors in personal and/or organizational action” (Zhou et al., 2007, p. 674). Social networks are important in the internationalization process of both large and small firms (Chetty and Blankenburg Holm, 2000). The advantages embedded in social ties are often referred to as social capital which can be considered TEs’ most effective resource (Acquaah, 2007; Prashantham, 2011). Social embeddedness is defined as “the density and strength” of an immigrant’s social ties within their local ethnic community and their homeland (Nielsen and Riddle, 2007, p. 5). Social embeddedness “not only helps in the founding of organizations, but also provides access to support during the entrepreneurial process” (Zaheer et al., 2008, p. 953). In their study of immigrants from three Latin American countries with firms in the USA, Portes et al. (2002) point out that the majority of TEs rely heavily on their ethnic ties in both their COO and COR. TEs are in a unique position to develop a dual social embeddedness due to the fact that they have lived in both their COO and COR which results in social embeddedness in both countries. It would be very difficult, if not impossible, for a nonimmigrant entrepreneur to gain a high level of dual social embeddedness in two countries without spending a considerable amount of time in both countries learning their culture, language, and social norms.

In order to examine the social tie-performance linkage in the context of transnational entrepreneurship, this paper posits that TEs’ dynamic capabilities mediate the relationship between TEs’ dual social embeddedness and firm performance. To examine the effect of social ties on TEs’ dynamic capabilities, this paper draws on the relational theory of social networks (Granovetter, 1973) to discuss the effect of TE’s social ties (ethnic and nonethnic ties in COO and COR) on the opportunity sensing and opportunity seizing organizational processes.

The relational theory of social networks emphasizes the social network relationship characteristics in terms of strong or weak ties (Granovetter, 1973). The strength of a tie can be defined in terms of a combination of “the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie” (Granovetter, 1973, p. 1361). Strong ties are more trustworthy but limited in scope due to being costly to establish and to maintain. On the other hand, weak ties are less expensive to maintain but associated with a greater scope suitable for transferring more, better, and novel information (Sharma and Blomstermo, 2003; Uzzi, 1997).

The effect of TEs’ social ties on opportunity sensing process

Social networks “facilitate the acquisition of knowledge and the discovery of opportunities” and contribute “to lowering risk and uncertainty inherent in international operations” (Weerawardena et al., 2007, p. 301). Multiple studies have established the significant effect of social networks on access to information and knowledge (Sharma and Blomstermo, 2003; Zhou et al., 2007). In regard to the opportunity seeking process, the relational theory of social networks suggests that weak ties are “more likely to link members of different small groups than are strong ties, which tend to be concentrated within particular groups” (Granovetter, 1973, p. 1376). On the other hand, strong ties “lead to overall fragmentation” (Granovetter, 1973, p. 1378) and may isolate individuals from the novel information flow. In other words, weak ties are more important than strong ties in providing access to a variety of information (Chung and Whalen, 2006) and, therefore, positively reinforce the opportunity sensing process in entrepreneurial firms.
In particular, TEs’ ethnic ties in their COO are important to acquire “fresh and timely information directly from reliable sources” (Lu et al., 2010). Most TEs are from developing countries associated with “the high level of uncertainty due to the ineffective nature of market-supporting institutions in facilitating economic exchange and access to information, resources, and knowledge” (Acquaah, 2007, p. 1239). Because of such uncertainty in the business environment especially in developing countries, TEs’ weak ethnic ties are very important to secure access to on-time information and knowledge.

**P1a.** In transnational entrepreneurial firms, expanding TEs’ ethnic weak ties in the COO is positively associated with the higher opportunity sensing process effectiveness. TEs may utilize their weak ethnic and nonethnic ties to obtain information about “permits, laws, management practices, reliable suppliers, and promising business lines” (Aldrich and Waldinger, 1990, p. 127) in the COR. Several studies suggest that TEs who did not extend their social network beyond their ethnic communities experienced a lower growth rate or even failure (Prashantham and Dhanaraj, 2010). TEs’ nonethnic weak ties in the COR are also important to overcome the TEs’ unfamiliarity with the COR culture and formal institutions:

**P1b.** In transnational entrepreneurial firms, the simultaneous development of TEs’ ethnic and nonethnic weak ties in the COR is positively associated with the opportunity sensing process effectiveness.

The effect of social ties on the opportunity-seizing process

The relational theory of social networks (Granovetter, 1973) suggests the entrepreneur’s social ties are the key for strategy implementation (Andersson and Wictor, 2003) and seizing opportunities. The key differentiator between weak and strong ties is trust (Granovetter, 1973). When it comes to seizing opportunities, entrepreneurs who employ trustworthy strong ties instead of costly formal contracts are more likely to succeed (Uzzi, 1997). Formal interorganizational alliances are usually associated with the threat of opportunism (Williamson, 1975); therefore, TEs may prefer to develop a close personal network based on trust so that they can avoid opportunistic behaviors (Aulakh et al., 1996; McDougall et al., 1994). Strong ties are essential to build the trust between partner organizations (Lu et al., 2010). In addition, the entrepreneur’s networks are crucial for acquiring the essential complementary resources and capabilities to seize opportunities (Blyler and Coff, 2003; Wu, 2007). TEs may benefit from relying on their strong social ties with top managers in buyer or supplier organizations, government officials and even community leaders (Acquaah, 2007) to access the resources that are required to successfully seize opportunities (Mesquita and Lazzarini, 2008).

TEs heavily depend on strong ties with their ethnic community and network relationships especially their ties to their COOs (Portes et al., 2002). Sequeira et al. (2009, p. 1035) argue that social activities such as participation in “hometown associations,” “political activity,” “sports clubs,” and “charity organizations” within the COO tightly connect TEs to their COO and provide them with strategic ties for managing their transnational business. Ethnic ties significantly affect location choice in new ventures and “serve as an important mechanism that ensures access to resources and key stakeholders, such as venture capitalists, the local government or local union leaders and employees” (Zaheer et al., 2008, p. 953). Strong social ties also facilitate the recruitment of the human capital necessary to seize opportunities and manage the business in the COO (Acquaah, 2007). Drori et al. (2009, p. 1011) emphasize the importance of social networks as being “instrumental for resource acquisition and eventual success.” Therefore, firms with high levels of social embeddedness are expected to outperform their competitors (Acquaah, 2007; Nahapet and Ghoshal, 1998):

**P2a.** In transnational entrepreneurial firms, the employment of TEs’ ethnic strong ties in the COO is positively associated with the opportunity-seizing process effectiveness.
On the other hand, strong ties may provide TEs in the COR with the endorsement, financial capital, and committed human resources. TEs need endorsement to overcome the lack of legitimacy in the COR (Lin, 1999; Lin et al., 1981; Moghaddam et al., 2016). Receiving such endorsements from nonethnic social networks is more instrumental than the ones from ethnic ties. TEs may employ ethnic rotating credit associations (Aldrich and Waldinger, 1990) or ethnic venture capitals (Zhang et al., 2016) to raise financial resources necessary to seize opportunities (Moghaddam, Tabesh, Weber and Azarpanah, 2017). Strong social ties facilitate the creation of the human capital (Acquaah, 2007; Coleman, 1988; Leana and Van Buren, 1999) necessary to seize opportunities and manage the business in the COR. Newbert (2005, p. 67) describes the hiring process as an important opportunity-seizing process, and Yang et al. (2011) emphasize the importance of strong ethnic ties in hiring committed and trustworthy employees. In a study of Chinese TEs in Canada, Wong and Ng (2002) found family networks, including not only immediate but also extended family members, a critical contributor to TEs’ success. In another qualitative study of Indian TEs in the USA (Moghaddam, 2015), successful entrepreneurs reported a high commitment in simultaneously establishing their strong ties with both ethnic and nonethnic communities in the COR:

P2b. In transnational entrepreneurial firms, the simultaneous employment of TEs’ ethnic and nonethnic strong ties in the COR is positively associated with the opportunity-seizing process effectiveness.

Institutional distance as a moderator of social ties-dynamic capabilities linkage

Context is essential in understanding institutional forces affecting entrepreneurial activities especially when transnational activities across developed and developing countries are concerned (Gupta et al., 2014; Welter, 2011). International management research is increasingly interested in understanding how “institutions affect business strategy, operations, and firm performance” (Riddle and Brinkerhoff, 2011, p. 398). Institutional differences can “accentuate variations in the types and rates of the firms being created, why and how they are created, and how they evolve over time” (Zahra and Wright, 2011, p. 73).

Institutions consist of three pillars: the regulative pillar, which refers to the setting, monitoring, and enforcement of rules; the normative pillar which describes a favorable code of conduct and the appropriate means to comply with it to gain legitimacy; and the cognitive pillar which refers to the mindset and understanding schema of individuals (Scott, 1995). Institutional distance is defined as the extent of dissimilarity “between the regulatory, cognitive, and normative institutions of two countries” (Kostova and Zaheer, 1999, p. 71). The international business literature suggests that in the case of high institutional distance, transnational enterprises encounter serious challenges to establish legitimacy in the target country and to transfer strategic routines to their foreign subsidiaries.

In contrast to the international business mainstream literature which considers institutional distance as a barrier negatively affecting internationalization (Ghemawat, 2001; Xu and Shenkar, 2002), this paper argues that higher institutional distance between the COO and the COR will make TEs’ dual embeddedness in their COO and COR even more valuable to explore opportunities unrealizable to other competitors (Drori et al., 2009) because institutional distance can be “an opportunity for arbitrage, complementarity or creative diversity” (Zaheer et al., 2012, p. 26).

The effect of institutional distance on social ties-opportunity sensing linkage. Considering contextual factors in entrepreneurship research contributes to better understanding “how entrepreneurs construct (or deconstruct) opportunities” (Zahra and Wright, 2011, p. 73).
Exposure to and understanding of the various institutions in both the COR and the COO facilitate the TEs’ environmental analyses to recognize opportunities that may not be easily identifiable for other competitors. In particular, TEs generally come from developing countries migrating to developed countries (Riddle, 2008); therefore, the institutional distance between their COO and the COR tends to be significant.

In developing countries with weak institutions, “the role of social ties in facilitating access to resources is likely to be even stronger” (Zaheer et al., 2008, p. 953). Griffith and Harvey (2001, p. 600) suggested the “market knowledge gap” (i.e. the knowledge difference between international partners related to the local market) sometimes facilitates the development of dynamic capabilities. Therefore, in the case of high institutional distance between the COO and the COR, TEs have a better chance to sense opportunities because of their dual embeddedness:

P3a. In transnational entrepreneurial firms, the larger the institutional distance between the COO and the COR the stronger the positive effect of TEs’ dual social embeddedness on opportunity sensing process effectiveness.

The effect of institutional distance on social ties-opportunity seizing linkage. Context is not only fruitful for examining opportunity sensing but also may enrich our understanding of entrepreneurial actions (Clarysse et al., 2011; Zahra and Wright, 2011). In order to successfully exploit an opportunity, a firm needs resources such as access to low-cost distribution networks, financial resources, and competent personnel; however, in many developing countries these resources are not “readily available because of the underdeveloped nature of the institutional structures” (Acquaah, 2007, p. 2141).

Most developing countries suffer from poor business infrastructure and a nontransparent legal and governance climate (Li et al., 2004); however, TEs may have an advantage to utilize their ethnic social networks in their COO as a substitute for the institutional infrastructure (Mesquita and Lazzarini, 2008) and sometimes enjoy the benefits of first mover advantages (Hoskisson et al., 2000) which is associated with superior performance:

P3b. In transnational entrepreneurial firms, the larger the institutional distance between the COO and the COR the stronger the positive effect of TEs’ dual social embeddedness on opportunity-seizing process effectiveness.

Conclusion
While entrepreneurship as a field of study is growing rapidly, it is criticized for the lack of commonly accepted and well-developed research paradigms (Aldrich, 2000; Hitt et al., 2001). As a field, “we know little about how to incorporate the different dimensions of entrepreneurial activities into theory building and testing” (Zahra and Wright, 2011, p. 72). Furthermore, entrepreneurship scholars have tended to examine complex constructs such as internationalization and capability development “without carefully recognizing their microfoundations” (Zahra and Wright, 2011, p. 77). Transnational entrepreneurship literature is not an exception and is characterized as fragmented (Lin and Tao, 2012). This paper briefly reviews the transnational entrepreneurship literature over the last decade and suggests a theoretical framework of TEs’ competitive advantage development for future empirical investigation. Figure 2 summarizes how the ethnic and nonethnic social ties of TEs affect their firm performance through the mediating effect of opportunity sensing and opportunity seizing and the moderating effect of institutional distance between the COO and the COR. While the ethnic ties play the key role in the COO, the simultaneous use of ethnic and nonethnic ties in the COR is essential for the success of the transnational entrepreneurship. In other words, the theoretical framework suggests that ethnic and
nonethnic ties of TEs should be considered complementary (not as a substitute for each other) in the pursuit of successful transnational entrepreneurship.

While the unit of analysis in most entrepreneurship literature is the entrepreneur, the strategic entrepreneurship approach calls for examining the entrepreneurial firm as the unit of analysis in order to employ firm-level strategic management theories (e.g. dynamic capabilities). However, the strategic entrepreneurship approach does not ignore the importance of entrepreneurs and their characteristics such as their experience, social networks, or cognition (Autio et al., 2011; Yang et al., 2011) and considers them as valuable resources of the entrepreneurial firm. With an emphasis on the entrepreneur, Zahra et al. (2006, p. 918) refer to dynamic capabilities as “the abilities to reconfigure a firm’s resources and routines in the manner envisioned and deemed appropriate by its principal decision-maker(s).” In the same vein, Autio et al. (2011) develop a cognition-based model of capability emergence in entrepreneurial firms. They describe how the cognitive model of entrepreneurs, at an individual level, may affect the organizational dynamic capability at the firm level. In the suggested model in Figure 2, the TEs’ personal social ties are considered valuable resources of the firm.

**Theoretical contribution**

The contribution of this paper is threefold. First, this paper is a response to the recent calls (Aldrich, 2000; Hitt et al., 2001) to develop theoretical models in the entrepreneurship field and incorporate “the different dimensions of entrepreneurial activities into theory building and testing” (Zahra and Wright, 2011, p. 72). Therefore, this paper employs the strategic entrepreneurship approach to offer a social tie-based model of dynamic capabilities in order to address the theoretical void in transnational entrepreneurship literature.

Second, the social networks-performance linkage which has been in a black box (Lahiri et al., 2012; Wu, 2007) is examined in terms of how strong and weak social ties may affect different zero-level organizational processes of dynamic capabilities differently. Based on the dynamic capability perspective, this paper explains how TEs may create their unique competitive advantage. The framework presented in Figure 2 is consistent with the notion that “without dynamic capabilities to transform entrepreneurial resources into future advantages, entrepreneurial resources do not translate into start-up performance” (Wu, 2007, p. 551).

Finally, this paper is a response to Zahra and Wright’s (2011) recent call for the importance of engaging context in theoretical models in the entrepreneurship field. Despite the recognition of the importance of the context in entrepreneurial activities (Shane and Venkataraman, 2001), scholars are commonly in search of general rules of entrepreneurship which might ignore context (Zahra and Wright, 2011). However, context is essential to theory building and meaningful theory testing (Whetten, 1989). In the proposed theoretical model of transnational entrepreneurship in Figure 2, the contextual factor of institutional distance is theorized as a positive moderator of the social tie-based dynamic capability development process. This conceptualization of institutional distance is in contrast to common application of institutional distance as a negative moderator in international business literature (Kostova and Zaheer, 1999; Xu and Shenkar, 2002).

**Implications for practitioners and policy makers**

From a managerial point of view, TEs are important because they are new players in today’s competitive global market. Transnational entrepreneurship literature emphasizes the importance of networks, and TEs can benefit from a better understanding of the impact of social networks on international market development (Chen and Tan, 2009). TEs should not solely focus on their ethnic social ties. That is why this paper suggests that ethnic ties in the COO and the COR may lead to higher firm performance only if systematically used alongside nonethnic ties in the COR. Furthermore, it is crucial for TEs to understand the
importance of dynamic capabilities in developing and sustaining their competitive advantage. In addition, TEs may be able to utilize institutional resources such as governmental programs promoting international business in both their COO and COR (Lu et al., 2010; Riddle et al., 2008; Soh, 2003).

From a policy making standpoint, governments may recognize the importance of the TE phenomenon in their economic development and provide their immigrants with the necessary aids and incentives to engage in transnational entrepreneurship. In particular, TEs significantly contribute to the economy of their COO by taking the role of the “first movers” who succeed and attract the attention of other immigrants or even foreign investors to the economic potentials of their COO (Lowell and Gerova, 2004, p. 20). Riddle et al. (2008) argue that COO governments should target, encourage, and support TEs through “investment promotion agencies.”

Limitations and future research directions
Some scholars criticize the dynamic capability perspective for being vague; however, Eisenhardt and Martin (2000) argue that dynamic capabilities are not vague but specific and identifiable processes (such as product development) which have some commonalities (best practices) across firms and can be learned. Based on the extant literature, Table I lists some potential operationalizations of the variables in the suggested theoretical model for future empirical investigation.

Although this paper advocates the employment of the dynamic capability perspective in order to understand how TEs create their unique competitive advantage, it does not downplay the importance of other theoretical frameworks such as psychological or cultural perspectives. While a large body of entrepreneurship literature proposes that psychological variables and personality traits may predict entrepreneurial behavior, the empirical findings are mixed (DeCarolis and Saparito, 2006; Shaver and Scott, 1991) and more research is needed.

Considering the fact that immigrants from different countries may have varied cultural heritage and backgrounds, a cultural approach in particular may look into the effect of immigrant nationality on how they engage in transnational entrepreneurship (Portes et al., 2002). Clark (1990) mentioned that national character not only affects the behavior of customers in different countries but also influences the decision making of business

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<tr>
<th>Concept</th>
<th>Operationalization</th>
<th>Reference</th>
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<td>COR ethnic weak tie</td>
<td>Ethnic community events</td>
<td>Rusinovic (2008)</td>
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<tr>
<td>COR nonethnic weak tie</td>
<td>COR professional associations</td>
<td>Rusinovic (2008)</td>
</tr>
<tr>
<td>COO ethnic weak tie</td>
<td>COO professional associations</td>
<td>Sequeira et al. (2009)</td>
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<td>COR ethnic strong tie</td>
<td>Ethnic rotating credit associations</td>
<td>Aldrich and Waldinger (1990)</td>
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<td>COR nonethnic strong tie</td>
<td>Ethnic venture capital</td>
<td>Zhang et al. (2016)</td>
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<td>COO ethnic strong tie</td>
<td>Nonethnic partners/suppliers</td>
<td>Aldrich and Waldinger (1990)</td>
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<td>Opportunity sensing process</td>
<td>Community leaders</td>
<td>Acquah (2007)</td>
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<td>Opportunity-seizing process</td>
<td>Research and development</td>
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<td>Building employee loyalty</td>
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<td>Institutional distance</td>
<td>Regulative dissimilarity</td>
<td>Kostova and Zaheer (1999)</td>
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<td>Transnational entrepreneurship</td>
<td>Travel agency</td>
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<td>Import/export firms</td>
<td>Wong and Ng (2002)</td>
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Table I. Operationalsization of concepts
managers with different nationalities. Therefore, future research may address questions such as: Do TEs from different countries behave differently? And if they do, how?

While ethnic ties (e.g. Chand and Ghorbani, 2011) and ethnic market knowledge (e.g. Shinnar et al., 2011) are both important success factors for TEs; this paper has primarily focused on social ties because they “facilitate the acquisition of knowledge and the discovery of opportunities” (Weerawardena et al., 2007, p. 301). In other words, social ties are the main dynamic mechanism of ethnic advantage. However, future studies may further explore the ethnic knowledge of TEs and how it is developed and employed in the pursuit of successful transnational entrepreneurship.

Overall, the rapid globalization process, international business, and soaring immigration trends promise an increasing population of immigrants especially from developing countries in developed countries. This trend in turn indicates an upward trend in transnational entrepreneurship. Therefore, both theoretical and empirical research is required to clearly and thoroughly unveil different aspects of transnational entrepreneurship.

Note
1. “Ethnic is an adjective that refers to differences between categories of people” and implies “a common origin and culture” (Aldrich and Waldinger, 1990, p. 112). Ethnic ties refer to those social ties between individuals or firms with a common COO and culture.

References


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RESEARCH NOTE
(How) Does 360-degree feedback benefit the field of entrepreneurship?

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Abstract

Purpose – Most of the studies in entrepreneurship depend on single-source rating methods to collect data on both predictors and criteria. The threat to effect sizes as a result of using single-source ratings is particularly relevant to psychology-based entrepreneurship research. Therefore, the purpose of this paper is to explore the prospects of applying 360-degree feedback to the field of entrepreneurship and to discuss a set of cases regarding how 360-degree feedback may boost effect sizes in entrepreneurship research.

Design/methodology/approach – A qualitative review of current literature was performed.

Findings – The review indicated that the effect sizes in psychology-based entrepreneurship research are mostly small and the use of single-source ratings is prevalent; some preliminary findings supported the utility of 360-degree feedback in entrepreneurship research; entrepreneurial orientation (EO) research may benefit from 360-degree feedback; and members of top management teams, employees from research and product development, sales agents, retail buying agents, store sales clerks, and consumers are all valid informants to provide ratings of EO.

Originality/value – The present study provided theoretical explanations and used empirical evidence to elucidate how 360-degree feedback may benefit the field of entrepreneurship. In addition, recommendations for future research using 360-degree feedback in entrepreneurship research were offered and discussed. A sample research study on EO using 360-degree feedback was delineated.

Keywords Entrepreneurship, 360-degree feedback

Paper type Conceptual paper

The 360-degree feedback has existed for a long time, and it has become an important topic in the fields of industrial and organizational psychology and human resource management (Bracken et al., 2016). For example, 360-degree feedback has been recommended by researchers and practitioners to measure performance because it allows a much
The present paper extends their recommendations to the field of entrepreneurship by providing examples of how 360-degree feedback may help to advance the understanding of important phenomena in the field of entrepreneurship.

Theoretical backgrounds of 360-degree feedback

Socio-analytic theory posits that self-reports and observer-reports have notable differences; the former evaluates the internal dynamics (e.g. identity) of an individual, whereas the latter assesses an individual's reputation (Hogan, 1991; Oh et al., 2011). Reputation largely depends on one's past performance and prior performance predicts one's future performance in a similar context. Hence, one's reputation is more predictive of actual behaviors than is one's internal dynamics, because the aim of observer ratings is behavioral prediction (Oh et al., 2011). In sum, socio-analytic theory yields two important implications. First, using observer ratings to capture one's social reputation or public self may be most appropriate for the goal of prediction; this is particularly true if observers closely interact with individuals who are assessed (Mount et al., 1994). Second, if self-report ratings and observer ratings capture different aspects of the individuals being assessed, then the combination of these two ratings should produce higher validity than either one of these rating methods used alone. This suggests that using multisource ratings (e.g. 360-degree feedback) should result in validity gains. Oh et al.'s (2011) meta-analytic findings provide support for these arguments. Except for emotional stability, Oh et al. found that operational validities of observer ratings of Big Five personality traits were substantially higher than those of self-ratings of Big Five personality traits, and the validities of the combination of self-ratings and observer ratings of Big Five personality traits were higher than ratings of either source. Since 360-degree feedback involves data collection from multiple different raters, Oh et al.'s meta-analytic study yields support for using 360-degree ratings to boost validities.

The above meta-analytic evidence demonstrates how the use of 360-degree ratings of predictors results in validity gain. Research evidence also shows validity gains as a result of the use of 360-degree ratings of a criterion. Since each rating source represents a unique and potentially valid perspective on a criterion, 360-degree ratings can address the problem of criterion deficiency because their use taps a greater fraction of a criterion than does any single-source rating (Oh and Berry, 2009). For example, Oh and Berry (2009) found that the operational validities of personality traits were increased by 50 to 74 percent when 360-degree ratings of the criterion were used compared to when single-source ratings of the criterion were used. In the following sections, we discuss the promise of using 360-degree feedback in the field of entrepreneurship.

Extensions of 360-degree feedback to the field of entrepreneurship

A preponderance of the entrepreneurship literature relies on single-source ratings (entrepreneurs' self-reported ratings); as such, some relationships of interest may be underestimated due to the problems of response distortion, like self-enhancement (i.e. intentional faking), self-deception (unintentional response distortion), and the inability to capture "blind spots" (aspects of the target person that only others can see). The influence of self-reported ratings may be particularly relevant to psychology-based entrepreneurship research (e.g. Ahmetoglu et al., 2011; Akhtar et al., 2013; Brandstätter, 2011; Frese and Gielnik, 2014), an area of inquiry that uses psychology-based constructs (e.g. psychological traits and motivation) to predict entrepreneurial outcomes (Frese and Gielnik, 2014). In this research area, single-source self-ratings of predictors and criterion variables are ubiquitous.
Some meta-analytic evidence has corroborated the importance and relevance of this area of inquiry. For example, meta-analytic findings demonstrated that all Big Five personality traits except agreeableness are significant predictors of entrepreneurial intention, business creation, and entrepreneurial performance (Zhao and Seibert, 2006; Zhao et al., 2010). Rauch and Frese’s (2007) meta-analysis showed the significant predictive validity of a set of personality traits such as self-efficacy, achievement motivation, risk propensity, innovativeness, stress tolerance, autonomy, and locus of control in predicting business creation and entrepreneurial success.

However, a perusal of the magnitude of validity coefficients from these meta-analytic studies indicated that very few of them are on a par with Cohen’s (1988) benchmark of moderate validity (i.e. 0.30). Some validity coefficients, such as risk-taking, are only around 0.10, which is barely in line with the benchmark of small validity. Our observation is consistent with Brandstätter (2011), who concluded that “the effect sizes are mostly small” (p. 222). We suspect that over-reliance on using single-source self-ratings of these psychological traits may result in underestimation of validity coefficients and may mask the truth that some psychological traits that were deemed as non-significant predictors based on the studies using single-source self-ratings may be significant predictors of entrepreneurial outcomes when 360-degree feedback is employed. Based on socio-analytic theory and Oh et al.’s (2011) meta-analytic findings, we argue that using 360-degree rating methods may boost validity coefficients, and such validity gain may further substantiate the legitimacy of psychology-based entrepreneurship research and clarify the full picture of this area of inquiry.

Empirical evidence of 360-degree feedback’s utility in entrepreneurship research

The preliminary research that has been done supports the utility of 360-degree feedback in entrepreneurship research. For example, Miao et al. (e.g. Miao, 2015; Miao and Coombs, 2015) examined how psychological traits predict individuals’ intentions to create businesses and to take over businesses. They assessed four psychological traits, which are risk propensity, emotional intelligence, proactive personality, and rebelliousness. Three individuals who were familiar with each focal subject were invited to provide observer ratings of these four psychological traits. They performed both regression analyses and relative weights analyses. Their study made two noteworthy contributions that substantiated the importance of 360-degree feedback in entrepreneurship research.

First, observer ratings of all of the aforementioned four psychological traits demonstrated incremental validities in predicting entrepreneurial start-up intention above and beyond self-ratings of them. Observer ratings of risk propensity and rebelliousness showed incremental validities in predicting entrepreneurial take-over intention over and above self-report ratings of them.

Second, it appears that using observer ratings is more likely to contribute incremental validities above and beyond self-ratings of them when measuring socially undesirable traits. This is because individuals engaged in more response distortion when socially undesirable traits (e.g. rebelliousness and risk propensity) were assessed via self-report ratings (Miao, 2015; Miao and Coombs, 2015). Therefore, use of observer ratings may help to mitigate social desirability bias in entrepreneurship research.

The above preliminary empirical findings support the theory that multisource ratings may boost validities in entrepreneurship research. In the following section, we discuss how 360-degree feedback may be applied in future entrepreneurship research.

Future directions of using 360-degree feedback in entrepreneurship research

The prior empirical example supports the utility of 360-degree feedback in individual-level entrepreneurship research. We also believe that 360-degree feedback may benefit the
research on firm level constructs in entrepreneurship, such as entrepreneurial orientation (EO) – a construct that consists of three salient dimensions (i.e., innovativeness, risk-taking, and proactiveness) and is construed as a top manager’s perception of a firm’s strategic stance (Frese and Gielnik, 2014; Miao et al., 2017; Rauch et al., 2009). Although EO is conceptualized as a firm level variable, it is actually measured at the individual level because it consists of the top manager’s individual psychological perception of EO. As such, it is susceptible to the powerful self-deception and impression management effects discussed previously. Top managers are likely to have strong motivations to see themselves, and their firms, as more innovative than they truly are. Even when top managers accurately report their own level of EO, they may have blind spots with regard to the EO of other employees scattered throughout the organization. In order to make EO an accurate firm level variable, EO should be measured throughout the organization at multiple levels and across multiple departments. This would result in a firm level measurement instead of an individual-level measurement of EO.

We argue that it may be useful to introduce additional raters of EO, such as customers, competitors, contractors, investors, or any other raters (stakeholders) who have direct, significant business-related interactions with the ratees (entrepreneurs) (Bracken et al., 2016). We propose that relevant other raters are in a better position to rate EO than are top managers, and the inclusion of their ratings may enhance validity coefficients. For example, customers may more accurately assess a firm’s innovativeness because they are the end-users of the firm’s products/services. A firm’s competitors may more accurately evaluate a firm’s proactiveness because they scrutinize the competing firm’s new products/services. Thus, incorporating 360-degree feedback may result in validity gain between EO and criterion variables because additional sources of ratings may capture unique variance that is not captured by single-source top managers’ ratings.

In sum, using multisource ratings of EO may serve two important purposes. First, averaging the scores from different rating sources of EO and employing an averaged value of EO will enhance the reliability and validity of EO (Mount et al., 1994). Second, the scores from each individual rating source can also be treated independently if one’s goal is to increase diagnostic validity, because different rating sources provide different perspectives of EO (Mount et al., 1994). For example, if one’s objective is to analyze the level of EO for a given firm and to use the information to improve a firm’s EO, then one may consider the scores of EO from each rating source in order to obtain a finer-grained view of a firm’s EO from different perspectives.

A sample research study on EO using 360-degree feedback

In light of the fact that there is no existing research, to the best of our knowledge, that used 360-degree feedback in EO research, we aim to delineate a sample study about how this can be done. The EO measure developed and validated by Covin and Slevin (1989) is the most widely used EO scale. This scale captures three major components of EO, which are innovativeness, risk-taking, and proactiveness. A sample study may capture these three components of EO by surveying different groups of informants and comparing and combining their responses on each item. When designing 360 degree and multi-rater studies, careful consideration should be given to the selection of the groups to be surveyed. As previously discussed, 360 degree and other multi-rater studies take advantage of the different yet valid knowledge and perspectives that different raters have. Since EO studies are concerned with innovativeness, risk-taking, and proactiveness, it is important to select survey groups who could be reasonably expected to have some knowledge of the firm’s performance along at least one of these dimensions, and to have differing perspectives as well.

In most EO studies, the entrepreneur, chief executive officer, and top management team are surveyed. Because of their positions at the top of the organization, they should have
inside knowledge of the organization’s strategies and performance. Although the entrepreneur might be the best person to survey, other members of management and the top leadership team would also be good informants, and a multi-rating approach might reveal significant differences of opinion at this level. Thus, almost all multi-rating studies on EO should include the entrepreneur and members of the top management team, and these respondents are likely to have the broadest range of knowledge across the three dimensions of innovativeness, risk-taking, and proactiveness. Because of their knowledge of the firm’s finances and the cost of developing new products, they might be in the best position in particular to judge risk-taking.

The members of the top management team might also be good choices to provide ratings of the entrepreneur’s personality traits. Because they work closely with the entrepreneur, they would be in a good position to observe the entrepreneur’s personal characteristics. Thus, for studies that are examining the relationships between EO and the personality traits, values, or other characteristics of the entrepreneur, the other members of the top management team would be good choices to provide independent ratings of the entrepreneurs’ characteristics. These could be compared to the entrepreneurs’ self-ratings and researchers could test if their ratings provide incremental predictability for the personal characteristics → EO relationship.

In most cases, it might be useful to survey employees as well. Employees in product development might be in an especially good position to assess innovativeness because that is closely related to their jobs. In addition, they might know if the entrepreneur and the top management team are proactively following up on opportunities to develop new products. The organization’s sales agents might also be in a good position to judge innovation and proactiveness because they come directly into contact with customers (or retail buying agents) and they have to discuss how their products compare to those of their competitors.

People outside the organization may also have some insight into the organization’s EO. Retail buying agents, who make decisions about buying and stocking the organization’s products, may be in an excellent position to judge the organization’s EO. In many cases, they make buying decisions after comparing the product features with competitors’ products, and they should also know how well the products sell. Depending on the product, retail outlets may also have sales staff who explain products to customers and who are supposed to be knowledgeable about the products being sold and their relative features. These retail employees may be considerably better informed than the average consumer about products and may know which brands first introduced new and innovative features.

Consumers need to be surveyed because they are the end-users of firms’ products/services and their perspectives on the products offered are likely to differ considerably from the entrepreneurs and their employees. In addition to the normal ego-enhancing biases that the firm’s employees may have regarding their products, the product designers and other professional employees may regard innovation in terms of highly technical details, whereas consumers may regard innovation primarily in terms of ease of use and overall functionality. Depending on the product, many consumers do considerable product comparisons before buying a product, and they are in the best position to judge whether the product meets their needs. It might be useful to survey two groups of consumers: those who bought the product and those who ultimately decided to buy another product instead.

Any study of EO should include a variety of objective data, including sales growth, money spent on research and development, and similar data. These would normally be collected from the entrepreneur granting access to the researchers.

After these scores are collected from different sources, factor analyses should be performed to analyze the factorial structure of the measurement items of EO. If all of the measurement items load on a single factor, then the scores from measurement items can be combined into a single one (Stam and Elfring, 2008). Since the scores on the surveys were
collected from different rating sources of EO, such a combination should result in higher reliability and higher validity of an EO scale. In addition, if one's major objective is to boost diagnostic validity, then the scores from each rating source may be treated independently, because that would allow an accurate assessment of a firm's level of EO across each component of EO, and consequently proper actions can be taken to improve a firm's EO.

As the above considerations make clear, the respondents included in any multi-rater study on EO should have some knowledge about the innovativeness of the organizations' products or services. For example, a study of entrepreneurial firms that sell electronic or similar goods through retail outlets might include the following groups in order to rate the organization's EO:

1. The entrepreneur and at least two members of the top management team. In addition to rating EO, the entrepreneur and the members of the top management team could also provide ratings of the entrepreneur's personality traits, values, or other characteristics.
2. Employees from research and product development.
3. The organization's sales agents.
4. Retail buying agents who make decisions about buying and stocking the organization's products.
5. Store sales clerks responsible for explaining and selling the product to consumers.
6. Consumers – both those who purchased the product and those who preferred to buy a competitor's product instead.
7. Objective data on research and product development expenditures, sales, growth, etc.

These groups would comprise an ideal study, but clearly, not all studies would need to include all groups. Including these different groups would allow researchers to test if the use of 360-degree ratings of predictors results in validity gain for entrepreneurship research in the same way that they have improved the validity of personality measures in human resource management research.

Conclusion
The present paper discusses the prospects of applying 360-degree feedback to the field of entrepreneurship and calls for more frequent use of 360-degree feedback in this field. We encourage future entrepreneurship researchers to consider using 360-degree feedback to improve the criterion-related validities of entrepreneurship-related constructs. In many cases, using 360-degree feedback could increase the size of the effects being studied, and perhaps even turn non-significant findings into significant ones. This increase in effect sizes would be consistent with the human resources research on personality traits, which saw an increase in operational validity of up to 74 percent when using 360-degree ratings (Oh and Berry, 2009). The limited research in entrepreneurship using 360-degree ratings supports the view that their use increases validities. For example, Miao et al (Miao, 2015; Miao and Coombs, 2015) found that observer ratings of traits increased incremental validities over self-ratings when predicting individuals' intentions to create businesses and to take over businesses.

Perhaps just as importantly, the use of 360-degree ratings obtained from employees throughout an organization creates true firm level measurements. Although EO is conceptualized as a firm level variable, it has traditionally been measured at the individual level. The 360-degree ratings can better assess the extent to which EO pervades an organization's culture and is valued across all levels and divisions of the organization.
Although there are likely to be substantial benefits to using 360-degree ratings, it must be acknowledged that there are considerable costs and inconveniences involved in using them. A far greater number of respondents would have to be involved, which would be costly in terms of the employees' time and effort. This cost could reduce the number of organizations willing to participate. The data analysis would also be substantially more complicated. On the other hand, the richness of the data gathered would be considerably enhanced, and the gathered data could be of considerably greater use to both the organization and researchers. For example, the 360-degree ratings could let top managers know the extent to which entrepreneurial attitudes are spread throughout the organization. Likewise, 360-degree ratings could inform them as to how their products are viewed by customers and buying agents.

Because of the complexities of doing 360-degree research, we do not feel that every study, or even most studies, should have to use 360-degree methods. However, the major findings in the field should be replicated using 360-degree methods in order to better establish the true effect sizes and relative importance of various variables. Journal editors and reviewers should recognize the value of such replications and encourage this type of research. In addition, researchers should use 360-degree ratings whenever there are likely to be problems of self-enhancement, self-deception, and an inability to capture blind spots. Because top managers are likely to overestimate their EO, it is important that at least some studies verify EO findings by using 360-degree ratings.

References


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