

Studies on Entrepreneurship, Structural Change  
and Industrial Dynamics

João Leitão

António Nunes

Dina Pereira

Veland Ramadani *Editors*

# Intrapreneurship and Sustainable Human Capital

Digital Transformation Through  
Dynamic Competences



Springer

# **Studies on Entrepreneurship, Structural Change and Industrial Dynamics**

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João Leitão • António Nunes • Dina Pereira •  
Veland Ramadani  
Editors

# Intrapreneurship and Sustainable Human Capital

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Competences

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# Insights into a New Research Agenda for the Behavioural Theory of the Firm

João Leitão, António Nunes, Dina Pereira, and Veland Ramadani

**Abstract** This chapter introduces the positioning of the need to advance and gather new contributions that give an effective extension to the so-called Behavioural Theory of the Firm, which requires the incorporation of new analysis lenses that value the economic irrationality associated with management with emotions, values and family principles of the company. The company's assets are not only a sum of tangible and intangible values, as they result from the history, work, competences, innovations relationships, unions and disunities of people, as a dynamic support of the evolutionary human capital of organizations.

**Keywords** Behavioural theory of the firm · Competences · Human capital

This edited volume contributes to the literature on entrepreneurship, structural change and industrial dynamics, by providing a selected set of research papers focused on this still unexplored issue concerning intrapreneurship and sustainable human capital.

Intrapreneurship has been positioned in the literature on strategic entrepreneurship as corresponding to a set of organizational practices which, within organizations, contribute to strengthening their innovation capacity.

This original positioning proposed by Alvarez and Busenitz (2003) has deep roots in resource-based theory (RBT), considering that entrepreneurship within the

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organization can be understood as part of the resource-based framework (Rumelt 1984; Conner 1991).

Intrapreneurship is particularly important for organizations, since it accelerates organizational growth, profitability and renewal as well as helping to secure organizations' business survival (Zahra 1991). For that reason, innovation has a relevant role in the sphere of organizational intrapreneurship, in that it is considered one of the dynamic competences (Cubico et al. 2018) that can contribute to the organization's renewal, its position within markets and industries or the competitive arena in which it competes (Heinonen and Korvela 2003). However, innovation is intrinsically linked to quality and to the productivity of the human capital available in countries, regions and organizations formed by entrepreneurial individuals (Baptista and Leitão 2015).

Therefore, advancing understanding of a missing connection, i.e. addressing the different ways in which intrapreneurship is related to the critical need to attract, train and retain human capital, also aiming for sustainability, requires more thorough and holistic study of various units of analysis: countries; regions; organizations; or individuals, as well as ways of creating and combining resources able to generate new heterogeneous resources. This can lead to an approach based on sustainable resources, which will contribute to differentiating all previously identified units of analysis, as well as generating sustainable competitive advantages.

In this framework, there is room to explore the role played by sustainable human capital in determining intrapreneurship from different perspectives. This has yet to be done, especially using cognitive and behavioural approaches applied to different contexts and units of analysis for better assessment of working behaviour, including very interesting socioemotional units of analysis, that is, family firms, which are complex and relevant laboratories to test this missing connection.

This is a topical issue, able to produce a solid body of theoretical and empirical applications devoted to intrapreneurship and sustainable human capital, to explore, in a pioneering way, new visions of strategic entrepreneurship, using behavioural and cognitive approaches, providing new material for the Behavioural Theory of the Firm (BTF), as suggested by Gavetti et al. (2012).

To this end, returning to the pioneering vision of Cyert and March (1963), this volume sheds new light on the issue of the collaborator-entrepreneur, i.e. the intrapreneur, consisting of maximizing the value of their behaviour in the organizational context, in which collaborator-entrepreneurs receive inducements from the organization in return for their contributions, and they aim to maximize these inducements. This assumption has not been greatly expanded in the literature with the argument that the decision-making process in organizations is rational and goal-oriented. Hence, managerial decisions aim to maximize both personal and organizational outcomes. Nevertheless, more can still be learned as the decision-making process is not always rational. Instead, we argue here that this is dynamic, digital, cognitive, behavioural and human.

Enhancing this ongoing debate, this edited volume presents a solid body of selected contributions, which substantially improve the current level of understanding about intrapreneurship and sustainable human capital, using eclectic approaches

and multidimensional analyses, considering the national, regional, organizational and individual levels of analysis.

In terms of highlights, firstly, it provides renewed views about strategic management and strategic entrepreneurship, in connection with the role played by dynamic organizational capabilities and behavioural competences following an analysis perspective sourced in BTF.

Secondly, it presents international benchmarks and entrepreneurial experiences, taking as the focus of analysis sustainable human capital, originating in different sectors and contextual scenarios including higher education institutions, family firms and ties, and high-flyer start-ups.

Thirdly, it explores a socioemotional and complex organizational laboratory, that is, the family firm, for better understanding of how they learn and behave over time to ensure sustainable growth, starting from their heart, sustainable human capital.

This edited volume is structured in three parts: Part I—Intrapreneurship, Human Capital and Work Behaviour; Part II—International Benchmarks and Experiences; and Part III—Organizational Challenges for Family Business.

It offers a selection of scholars and research methods, both qualitative and quantitative. The authors are from 13 different countries, namely, Mexico, Brazil, Chile, Indonesia, Kuwait, Macedonia, Bosnia and Herzegovina, Turkey, Portugal, Ireland, Italy, Spain and France, revealing the international interest and coverage of this challenging topic of research in the scope of Entrepreneurship Theory. The present edited volume features 14 scientific contributions on the connection between intrapreneurship and sustainable human capital.

The introductory article by João Leitão, António Nunes, Dina Pereira and Veland Ramadani sets the stage for studying the still unexplored relationship between intrapreneurship and sustainable human capital, by summarizing the main contributions and raising new questions to be addressed in this challenging research framework for entrepreneurship and innovation scholars that crosses behavioural and organizational approaches applied to the national, regional, firm and individual levels of analysis, and presents an overview of the contributions included in this edited volume.

In Part I—Intrapreneurship, Human Capital and Work Behaviour, six original contributions deal in an innovative way with entrepreneurship and innovation topics, such as organizational performance, individual entrepreneurship capacity and innovative working behaviour. Renewed views of strategic management and strategic entrepreneurship are also developed, in connection with the role played by dynamic organizational capabilities and behavioural competences, aiming to foster intrapreneurship.

In Chapter “Non-economic Organizational Performance of SMEs: Is There a Rationale for a Cognitive Entrepreneur?” Leitão and Franco address an unexplored relationship between non-economic organizational performance and individual entrepreneurship capacity, selecting as the focus of analysis, promotion of a truly cognitive entrepreneur. Using data at the individual level of analysis relative to the founder or owner of small and medium-sized enterprises (SMEs), the authors assess the relationships between SMEs’ non-economic performance and three types of

capital: human; social; and organizational. To measure non-economic performance, a variable representing collaborators' satisfaction is used, aiming to provide new implications to foster SME performance through management of a triad of capitals originating from the individual.

In Chapter "The Impact of Innovative Working Behaviour on Employees' Working Performance", Berisha, Ramadani, Gërguri-Rashiti and Palalić tackle study in an original way the relationship between innovative working behaviour (IWB) and employees' performance. The authors consider working behaviour as the initiative taken by employees to improve work, in order to assess its impact on work performance. The theoretical framework designed by the authors converges on the fact that employees with a higher level of IWB are expected to be star performers in their workplace. It is also argued that an organization needs to increase awareness of the importance of innovative working behaviour among its employees. Based on the empirical findings, useful recommendations are provided for organizations, to raise awareness of innovation on the employee side.

In Chapter "Strategic Entrepreneurship and Its Effect on Human Capital and Employee Retention", Kearney examines the contribution of strategic management and entrepreneurship to strategic entrepreneurship. The author draws on previous models and produces a conceptual framework of strategic entrepreneurship. From an innovative perspective, the proposed framework incorporates human capital and employee retention, which can influence both strategic entrepreneurship and its outcomes in terms of value creation and wealth generation. This new perspective is extremely valuable since it extends the current understanding of its effect on human capital and employee retention, as well as the distinct ways in which human capital and employee retention can influence strategic entrepreneurship.

In Chapter "Linkages Between Cognitive and Behavioral Competences to Assess the Organizational Dominant Logic", Palma-Ruiz, Serrano-Bedia and López-Fernández approach the concept of dominant logic and through an exhaustive literature review reveal the need for an operationalization approach, to be able to assess the dominant logic of organizations, exploring both cognitive and behavioural elements addressed in the literature. Following this complex rationale, key elements in assessing the dominant logic of organizations are identified. The empirical approach using multiple linear regressions reveals the contribution of human capital and how it translates into an organizational dominant logic, with implications for organizational outcomes.

In Chapter "Toward the Creation of Intrapreneur-Friendly Organization", Ramdhani, Fauzizah, Alamanda and Anggadwita advocate that organizational accelerators and incubators are planned to enable continuous communication flows with the industry's leading start-ups. The theoretical roots referred to in the chapter advocate that the main source of entrepreneurial competitive advantage is based on the set of organizational capabilities, following a resource-based strategy. In the empirical approach, the authors use a structural equation modelling approach, revealing that knowledge-sharing and organizational capabilities have a significant impact on intrapreneurship, as well as organizational factors having a dominant influence on increasing the value of intrapreneurship.

In Chapter “Links and Demographic Comparisons to Conflict Management and Counterproductive Work Behavior”, Cavus, Develi and Gugercin analyse the effects of conflict management on counterproductive work behaviour. The empirical findings reveal that the integrating style reduces organizational deviance and the dominating one increases interpersonal deviance, whereas compromise reduces both interpersonal and organizational deviance. Using a perspective of perceptions, integration is perceived female participants more than males. Domination is perceived more by private than public sector employees. Younger employees perceive conflict management and its two dimensions, obliging and compromising, more than older ones. Males tend to behave more counterproductively than females. Counterproductive work behaviour is revealed less by younger employees, as opposed to employees with postgraduate education.

In Part II—International Benchmarks and Experiences, four original contributions illustrate diverse international benchmarks and entrepreneurial experiences, which have a common motivation, that is, to address the organization’s heart, namely, educated people, intrapreneurs and entrepreneurs, including different sectors and contextual scenarios in higher education institutions, family firms and high-flyer start-ups.

In Chapter “Human Capital and Entrepreneurial Intentions in Bosnia and Herzegovina”, the contribution by Palalić, Bičo, Ramadani and Dana approaches the established topic in the entrepreneurship literature connected with human capital, incorporating students’ perspective in the context of Bosnia and Herzegovina (B&H). The authors explore the main pillars of human capital through an exploratory case study applied to university students. Several insights were derived from the research, especially directed to policy and decision-makers, who should work hard on policies that will prevent young people from leaving B&H. In turn, it is recommended that educators do their best to develop young people’s (students’) knowledge, skills and competences, giving them an entrepreneurial mindset to serve society and thus provide welfare to all.

In Chapter “Education, Gender, and Entrepreneurial Intention: The Case of MEXICO”, Huezco Ponce and Saiz-Álvarez analyse how quality education influences entrepreneurial intention and the achievement of sustainable human capital management. The authors use an ANOVA analysis, to assess how gender, level of studies and parents’ schooling influence students’ entrepreneurial intention. The empirical findings reveal that the type of studies chosen by students affects their entrepreneurial intention; women and men show similar entrepreneurial intentions; and parents’ occupation and their higher level of study have a positive influence on their children’s entrepreneurial intention and contribute to reaching sustainable human capital management.

In Chapter “Knowledge Accumulation and Management as a Generator of Resources and Dynamic Capabilities of Organizational Effectiveness, Behavior, and Performance”, Barros-Contreras and Palma-Ruiz advocate that the knowledge accumulation process is strongly influenced by the common history of the family founding the business. Here, relationships of trust and affection between family members foster communication and contribute to improving knowledge

management and organizational learning. The authors pave the way for future studies to address and test these relationships of family involvement and essence, which are expected to have distinct effects on the knowledge accumulation process, which in turn, can influence organizational effectiveness, behaviour and firm performance.

In Chapter “Who’s Winning the ‘Survivor’ Race? Gazelle or Non-gazelle Startups”, Pereira, Leitão and Baptista focus on the entrepreneurial level and individual entrepreneur determinants of start-up survival, contrasting gazelle and non-gazelle start-ups. They use a Cox proportional hazard model specification, revealing that the significant determinants of firm survival are: the founders’ college education; IP activity; firms’ small and medium size; and the gazelle condition. The authors claim that the owners’ work experience and the small and medium size of companies, as well as internal R&D activities moderated by capitalization access, increase the chances of firm survival. Crisis increases firms’ exit, but start-ups pursuing a strategy of competitive advantage, and the moderating effect of start-up capital on their internal R&D activities increase the chances of survival.

In Part III—Organizational Challenges for Family Business, four innovative contributions are aligned with the vision founded on the need to open up the black-box of a complex and socioemotional laboratory, which is taken here as a still unexplored organizational unit of analysis, that is, the family firm, where emotions, absorptive capacity, learning behaviour, human relationships, financing sources, motivation and social capital play different roles in influencing the sustainability of family units.

In Chapter “The Innovative Performance of Family Businesses: An Essay About Intellectual Capital and Absorptive Capacity”, Rocha and Leitão make an original survey of the literature on the intellectual capital and absorptive capacity of family businesses for innovative performance, identifying previous results and the gap in the literature to be filled. The authors propose an original conceptual model, outlining the need to deepen knowledge about the role played by organizational members’ personal characteristics, organizational relationships and internal procedures, which need to be managed, to foster the family firm’s knowledge creation process.

In Chapter “Family Management and Firm Performance: The Interaction Effect of Technological Innovation Efficiency”, Martínez-Romero, Martínez-Alonso, Casado-Belmonte and Diéguez-Soto provide an innovative contribution by analysing how family members’ presence in top management teams (TMT) impacts on firm performance. The authors also approach the effect associated with a still unexplored interaction factor, that is, the efficiency of technological innovation, which is considered critical in improving firms’ competitiveness. Using a panel data analysis applied to private manufacturing firms, the empirical findings reveal a negative impact of family members’ presence in TMT on firm performance. However, the efficiency of technological innovation weakens the negative effect of family members’ presence in TMT on firm performance.

In Chapter “Innovation and Internationalization as Efficiency Engines for Family Businesses: Analyzing the Case of Portugal”, Costa analyses the role played by



innovation and internationalization along with other structural characteristics in the economic performance of family firms. The author uses a multivariate model to ratify the determinant role associated with innovation, exports and human capital in terms of family firms' performance. In addition, other structural characteristics of family firms revealed to determine family firms' performance are productive potential, longevity and success. Given the importance of these structures, to reinforce the competitiveness of an industry formed mostly by family firms, new effective policies on innovation and industry cohesion are proposed.

In Chapter "CEO's Entrepreneurial Profile and Survival of Internationalized Wine Sector SMEs in Portuguese Region of Ribatejo", Martins and Leitão highlight the importance of the CEO's entrepreneurial profile, revealing its importance for the survival and internationalization of small and medium-sized enterprises (SME) in the wine sector. Empirical evidence reveals that CEOs, as individuals with a global mentality, are extremely alert and always ready to seek international opportunities to obtain additional benefits. To do so, they have to overcome different barriers in the course of the internationalization process, determining the decision-making mechanisms that involve different modes of entry into new markets, always bearing in mind the sources of competitive advantage, in order to ensure greater financial sustainability and responsible profit sharing in the future.

In Chapter "Socioemotional Wealth and Financial Performance and Their Impact on Innovation Initiatives in Mexican Family Businesses: A Case Study", Durán-Encalada and Vázquez-Villalpando address the connection between family firms' goals with the resources and competences used for prosecuting entrepreneurial actions oriented to innovation. Using a qualitative approach based on two exploratory case studies, it is revealed an alignment between financial performance and socioemotional wealth, as well as the different types of resources and competences that a family firm need to display. In this qualitative set-up, the firm's entrepreneurial orientation may moderate the previously referred alignment.

Lastly, it should be noted that the value added provided by this edited volume is due to the lack of profound contributions to BTF, especially connecting intrapreneurship and its endogenous production factor, that is, the entrepreneurial human capital located at the heart of organizations, regions and nations.

Considering the recent public attention paid to behavioural approaches in economic sciences, by awarding the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2017 to Richard H. Thaler "for his contributions to behavioural economics", the importance and potential of BTF is unquestionable, justifying further research efforts and holistic approaches, as presented in this edited volume.

A final word of gratitude to the Springer Editor, Prashanth Mahagaonkar, for his clear guidance during the edition/creation process of the "Studies on Entrepreneurship, Structural Change and Industrial Dynamics" series. We believe this edited volume will become a highly cited book in future research on the Behavioural Theory of the Firm. We would like also to thank the assistant editors and reviewers who contributed greatly with their valuable time and efforts to improving the quality

of the chapters now made available to the open community of academic scholars and practitioners.

## References

- Alvarez, S., & Busenitz, L. (2003). The entrepreneurship of resource-based theory. *Journal of Management*, 29(3), 285–308.
- Baptista, R., & Leitão, J. (Eds.). (2015). *Entrepreneurship, human capital and regional development* (International studies in entrepreneurship). New York: Springer. isbn:978-3-319-12870-2.
- Conner, K. (1991). A historical comparison of resource-based theory and five schools of thought within industrial organization economics: Do we have a new theory of the firm? *Journal of Management*, 17(1), 121–154.
- Cubico, S., Favretto, G., Cantner, U., & Leitão, J. (2018). Introduction. In S. Cubico, G. Favretto, U. Cantner, & J. Leitão (Eds.), *Entrepreneurship along the industry life cycle: The changing role of entrepreneurial activities and knowledge competences* (Studies on entrepreneurship, structural change and industrial dynamics). Heidelberg: Springer. isbn:978-3-319-89335-8.
- Cyert, R., & March, J. (1963). *A behavioral theory of the firm*. Prentice Hall, NJ: Endlewood Cliffs.
- Gavetti, G., Greve, H., Levinthal, D., & Ocasio, W. (2012). The behavioral theory of the firm: Assessment and prospects. *The Academy of Management Annals*, 6(1), 1–40.
- Heinonen, J., & Korvela, K. (2003). *How about measuring intrapreneurship?* Milan: EISB Conference.
- Rumelt, R. (1984). Towards a strategic theory of the firm. In R. Lamb (Ed.), *Competitive strategic management*. Englewood Cliffs, NJ: Prentice-Hall.
- Zahra, S. (1991). Predictors and financial outcomes of corporate entrepreneurship: An exploratory study. *Journal of Business Venturing*, 6(4), 259–285.

**Part I**  
**Intrapreneurship, Human Capital and**  
**Work Behaviour**

# Non-economic Organizational Performance of SMEs: Is There a Rationale for a Cognitive Entrepreneur?

João Leitão and Mário Franco

**Abstract** This chapter contributes to the literature on entrepreneurship and small business management by testing the relationship between the non-economic organizational performance and the individual entrepreneurship capacity and by providing new insights about the need for promoting a truly cognitive entrepreneur. Toward the use of individual data relative to the founder or owner of SMEs, we assess the relationships between the non-economic performance of Portuguese SMEs and three types of capital: human, social, and organizational. It uses collaborators' satisfaction as a metrics for non-economic performance and provides new insights for improving SMEs' performance. The results provided the identification of four principal factors, which include all the types of individual capital considered in the analysis. The estimation of logistic regressions points out that only two factors present significant influences on the non-economic performance of SMEs. On the one hand, in terms of the factor 3, although it is capable of influencing negatively, in global terms, the non-economic performance of SMEs, it can be enhanced that interdepartmental meetings have a significant and positive influence on non-economic performance of SMEs. On the other hand, the analysis of the factor 4 reveals equally a global negative influence, although the human capital and cognitive variables that represent the entrepreneur's intuition and competences of human resources are capable of influencing positively the behavior of the answer variable concerning non-economic performance of SMEs.

**Keywords** Non-economic performance · Satisfaction · Small and medium enterprises

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## 1 Introduction

The concept of organizational performance has been based upon the idea that an organization is a voluntary association of productive assets, including human, physical, technological, and capital resources, in order to achieve a common purpose (Alchian and Demsetz 1972; Jensen and Meckling 1976; Simon 1976; Barney 2002).

Performance is so common in research about small business management that its structure and definition is rarely explicitly justified; instead its appropriateness, in no matter what form, is unquestionably assumed (March and Sutton 1997). The definition of organizational performance is a surprisingly open question with few studies using consistent definitions and measures (Kirby 2005).

According to Richard et al. (2008), organizational performance encompasses three specific areas of firm outcomes: (i) financial performance (profits, return on assets, return on investment, etc.); (ii) market performance (sales, market share, etc.); and (iii) shareholder return (total shareholder return, economic value added, etc.).

Although across the literature, it has been pointed out that enterprises with higher levels of human, organizational, and social capital tend to have improved organizational performance (Youndt et al. 2004); there is a caveat in the literature about the relationship between non-economic performance and the individual entrepreneurship capacity (IEC) owned or acquired by small and medium enterprises (SMEs).

Moreover, there is a resulting lack of studies that consider the individual level of analysis, on the role played by the entrepreneur's capacity for determining organizational performance. Thus, the unit of analysis of the present chapter is the entrepreneur. The main justification for this is that the process of opportunity discovery is a cognitive process (Brigham et al. 2007), which is determined by the entrepreneur that owns and manages distinct types of capital. This is an important point since there is lack of studies on the role played by distinct types of capital determined at the individual level and within the SMEs, in terms of the strengthen process of the non-economic organizational performance. For this purpose, the individual characteristics of the entrepreneur are captured through the use of different variables that take part of different dimensions that represent distinct types of individual capital that impact on entrepreneurial performance (Leitão and Franco 2010).

This chapter makes an attempt to: (1) shed light on the capital determinants of non-economic organizational performance; (2) provide an innovative analysis through the use of a subjective indicator for measuring non-economic organizational performance; and (3) present new insights for the importance of non-economic organizational performance of SMEs, through the promotion of a cognitive type of entrepreneur.

The remainder of the chapter reviews the literature and derives hypotheses from the influence of combining distinct types of capital, observed at the individual level, on the non-economic organizational performance of SMEs. An exposition of the

database precedes the empirical results, while a final discussion section concludes the study.

## 2 Prior Literature and Hypotheses Development

### 2.1 Organizational Performance

In management research, various indicators, both economic (objective) and non-economic (subjective), have emerged to measure organizational performance. However, it has been difficult to operationalize the concept of performance (Lu and Beamish 2006), and there is a lack of consensus regarding the measures of performance in management field. This subject, according to Park and Ungson (1997), has complicated interpretation and comparison of the results of investigations already carried out. Efforts to identify the variables associated with the organizational performance, and what should be done with a view to attaining the results, have been limited, due precisely to the lack of comparison and reliability of alternative measures of business performance (Geringer and Hebert 1991). More exactly, there has not been a comprehensible explanation of the relevant variables that affect performance, or development of a network of hypotheses for explaining and predicting organizational performance (Osland and Cavusgil 1996).

Measurement of organizational performance is a controversial topic. This debate is associated with traditional financial/economic measures, for example, return on investment, profit, growth (Smith et al. 1987), and returns sales (Chong 2008).

In this context, Bucklin and Sengupta (1993) claim that economic or financial measures of performance, such as sales and profit, may not clearly reflect the quality of the SMEs' performance. Osland and Cavusgil (1996) also stated that profit, as an economic measure, is not directly comparable across different sectors and stages in the lifecycle of SMEs.

Financial measures are objective, simple and easy to understand and compute, but in most cases, they suffer from being historical and are not readily available in the public domain (Chong 2008). Sapienza et al. (1988) and Geringer and Hebert (1991) suggest that financial data are often not published, and when that type of data is made public, then it will be merely incorporated in calculations of financial performance. In fact, a financial or economic measure is unlikely to capture the relative performance of the firms. As Anderson (1990) states, economic measures assess only one specific dimension of organizational performance.

In the same line, Covin and Slevin (1989) and Chong (2008) suggest that organizational performance can be better able to reach efficient objectives/goals than economic results. This vision reveals that financial and economic measures present critical limitations in assessing performance. An alternative way is to apply the non-economic measures, though subjective in nature, as supplements to the economic measures (Covin and Slevin 1989; Begley and Boyd 1987; Sandberg and Hofer 1987). The combinations of these two measures (economic and

non-economic) help the owners or managers to gain a wider perspective on measuring and comparing their entrepreneurial performance, in particular the extent of effectiveness and efficiency in utilizing the resources, competitiveness, and readiness to face the growing external pressure including globalizations (Chong 2008).

According to Chong (2008), assessment of the performance should be made in a complementary way, by analyzing its effect on other subjective (non-economic) measures, such as number of employees (Davidsson 1991; Mohr and Spekman 1994; Robinson and Sexton 1994; Orser et al. 2000), growth in market share (O'Farrell 1986), revenue across time (Miller et al. 1988), revenue per employee (Johannisson 1993), and customer's satisfaction (Leseure et al. 2001).

A satisfaction measure is a dimension that should be assessed by qualitative factors, which are usually ignored or neglected in studies in the management field (Bucklin and Sengupta 1993). Thus, this type of subjective measure may be used for measuring organizational performance (Smith and Barclay 1997).

There is very little empirical investigation examining the determinants of non-economic organizational performance of SMEs. Nevertheless, based on the literature review on small business management and entrepreneurship, Shamdasani and Sheth (1995) suggested three relational factors to measure satisfaction: commitment, competence, and compatibility.

In fact, recognizing the deficiencies of traditional financial and economic measures of performance, some authors (e.g., Osland and Cavusgil 1996; Leseure et al. 2001), for determining performance in SMEs, have relied on a general measure of satisfaction. The main advantage of this type of measure resides in its capacity for supplying information as to what extent the entrepreneurs reach their overall objectives. The successful performance of SMEs does not only depend on good economic performance, but rather on the way the entrepreneurs and employees work together and fulfill their activities and objectives in a joint and coordinated basis. As noted by Roper (1996), the entrepreneur is the development lever that determines whether any business venture will succeed or fail. This vision will guide our subsequent revision about types of capital and the formulation of hypotheses, but framing it, in terms of the role played by distinct types of capital, at the individual level, that is, the entrepreneur, which may influence the non-economic organizational performance of SMEs, with a special focus devoted to the combination of three types of capital: human, social, and organizational.

## ***2.2 Human Capital***

Taking as reference the guidelines emanated from the Lisbon and Barcelona European councils, human capital is essential to transform ideas and innovations into new processes, goods, or services. Moreover, additional investments in knowledge and education can generate substantial returns over the long run (Cerchione and Esposito 2017).

This way, the recent focus on the accumulation of intangible assets like the education of the labor force or the abilities to participate in the innovation process play a key role within the micro and innovative units that contribute for economic growth, especially, the SMEs.

Although of what was previously stated, the Becker's (1964) approach about the returns to human capital investments associated with training, work experience, and accumulated skills/knowledge, suggests the need for understanding better the role played other related types of capital that may determine networking and valuation of entrepreneurial units.

Human capital accumulation is a cornerstone in the models of endogenous growth developed by Lucas (1988) and Romer (1990). In a different perspective, other authors have considered human capital as an input to the production process like any other productive factors. Its accumulation leads to increased capital deepening and a period of accelerated growth (Mankiw et al. 1992; Dumay and Garanina 2013). Others like Aghion and Howitt (1992) have emphasized the critical role for the discovery and adaption of new ideas and innovations.

Excepting Hsu (2007) and Gompers et al. (2008), studies focused on the individual level of analysis that take into account the prior venture founding experience are rare in the academic literature about entrepreneurship.

It is not an easy task to find suitable proxies for representing a multidimensional phenomenon, such as, the human capital, especially at an individual level of analysis. The most common measures include the schooling years or the labor force percentage with secondary or tertiary education, or rates of enrollment (Barro and Lee 1993, 2000). Nevertheless, other resources that can adequately represent human capital should not be disregarded, for example, training on the job, specific knowledge, and previous working experience.

As indicated by Brigham et al. (2007), under a cognitive approach, why not considering, at the individual level, other specific resources? Examples of these are: enthusiasm at work; entrepreneur's intuition; competences of human resources; and multiple skills of working groups. Thus, from the prior literature on human capital, we derive the following first set of hypotheses:

**Hypothesis 1a** Enthusiasm at work influences positively the non-economic organizational performance.

**Hypothesis 1b** Entrepreneur's intuition influences negatively the non-economic organizational performance.

**Hypothesis 1c** Competences of human resources influence positively the non-economic organizational performance.



### 2.3 *Social Capital*

After the introduction of the concept of social capital by Loury (1977), in the literature we can find distinct studies that promoted the importance of this type of capital, for example, DiMaggio and Mohr (1985), Bourdieu (1986), Flap and De Graaf (1986), Coleman (1988), and Fratoe (1988).

During the last two decades, social capital has been associated with better qualification and education (Coleman 1988); higher standards of economic growth (Knack and Keefer 1997), higher value creation by firms (Nahapiet and Ghoshal 1997), superior financial development (Guiso et al. 2004), and highly qualified innovative outcomes (Akçomak and Weel 2008).

According to Stuart et al. (1999) and Subramaniam (2017), the importance of social networks and social capital in resource acquisition has been neglected. This way, the personnel characteristics, social skills, and charisma of an individual (Glaeser et al. 2002; Lang et al. 2010) have not been fully explored in empirical analysis about the entrepreneurial capacity of organizations based on different types of capital owned and managed by their respective founders or owners.

It should also be stressed the increasing importance of social networking as a strategic resource for creating new ventures, and for attracting and recruiting qualified human capital (Coleman 1988; Bygrave and Timmons 1992), as well as in establishing strategic alliances or partnerships that lead to performances that are characterized by outstanding levels of organizational performance (Shane and Stuart 2002).

Following Hsu (2007), this is a quite important signaling mechanism in terms of the credibility associated with the expected venture success. A part the interrelation between the resources of human capital and social capital, also organizational performance may result from the contingencies related to the way entrepreneurs signal the quality of the economic activity they are currently leading. The influence of prior experience and also of entrepreneur's (founder or owner) management style on the organizational performance deserves to be explored and understood. This way, from the literature review about social capital, we derive the following second set of hypotheses:

**Hypothesis 2a** Available information about the values, objectives, and performance of enterprise influence positively the non-economic organizational performance.

**Hypothesis 2b** Creation of working groups for decision-making purposes influence positively the non-economic organizational performance.

**Hypothesis 2c** An open and participative environment for debating with leaders about the difficulties and subjects related with work influence positively the non-economic organizational performance.

## 2.4 *Organizational Capital*

In the vision of Dess and Picken (1999), the organizational capital is used in linking the resources of the organization together into processes oriented for creating value to customers and reaching sustainable competitive advantages for the enterprise. In operational terms, these processes embrace distinct resources that deserve further exploration and research, namely, (1) organizational and reporting structures; (2) operating systems; (3) procedures and task designs; (4) information and communication infrastructures; (5) resource acquisition; (6) development and allocation systems; (7) decision processes and information flows; (8) incentives, controls, and performance measurement systems; and (9) organizational culture, values, and leadership.

In terms of productivity, there is an extensive literature documenting the relationship between organizational capital and firm performance. Examples of this can be found in intra-industry studies by Ichniowski et al. (1997), Arthur (1994), Kelley (1994, 1996), Bailey (1993), and Dunlop and Weil (1996).

Considering business performance as measured by labor productivity, in all of the studies previously referred to was found a correlation between human resource management systems and business performance, Tobin's  $q$ , or present value gain in cash flow and firm market value. Many of these have also found evidence of the existence of synergies among workplace practices.

The successful performance of an organization is attributed in the literature to the existence of a supportive culture with strong corporate purpose and compelling values (Peters and Waterman 1982; Collins and Porras 1994). Additionally, the involvement of skilled and motivated employees influences the way how work is performed and gets accomplished (Delaney and Huselid 1996).

The theoretical work of Milgrom and Roberts (1995) and Kandel and Lazear (1992), along with the empirical studies mentioned above, is an important contribution in this area. Milgrom and Roberts (1995) argue that the impact of a system of human resource practices will be greater than the sum of its parts because of the synergistic effects of bundling practices together. Kandel and Lazear (1992) argue that introducing a profit sharing plan for all workers in an enterprise may have little or no impact on productivity unless it is linked with other practices that address the inherent free rider problem associated with corporate wide profit sharing plans.

For this purpose, and following the perspective of Delaney and Huselid (1996), if the entrepreneur is focused in fostering the organizational performance, then his actions will be characterized by management and promotion oriented to employee participation (Wagner 1994), internal career ladders (Osterman 1987), and team-based working (Levine 1995). Nevertheless, the routines and processes promoted, at an individual level, that act as the glue for organizations can either enhance or disable the free flow of innovative advances from creative ideas (Rumelt 1984), and cooperative working (Leitão and Franco 2010). These are good examples of core arguments that point out for the global perspective that organizational structures and

processes must support the objective of having requisite variety within the organization (Jacques 1992) without creating boundaries between individuals and groups.

Youndt et al. (2004) reinforce the precedent vision, by including in the spectrum of organizational capital, institutionalized knowledge, and codified experience, which are stored in databases, routines, patents manuals, and structures. Summing up, this is an example of intangible asset that represents a specific type of knowledge only owned by the enterprise. Thus, from the prior literature on organizational capital, we consider the following third set of hypotheses:

**Hypothesis 3a** Interdepartmental meetings for organizing the information and their needs, avoiding duplicate information and resistance to change, and influence positively the non-economic organizational performance.

**Hypothesis 3b** Economic incentives for accepting changes at work influence negatively the non-economic organizational performance.

**Hypothesis 3c** Use of external indicators, for detecting needs and room for improving, influence positively the non-economic organizational performance.

### 3 Database and Empirical Strategy

A database of Portuguese SMEs<sup>1</sup> was constructed, through the previous administration of a questionnaire to 300 enterprises, during the period of March–June, 2006. The answer rate was 26.7%. The selection criteria were: (1) statistical classification of economic activities (NACE—Classification of Economic Activities in the European Community) and (2) dimension (given by the number of employees).

The sample is composed of enterprises from different types of industries. However, manufacturing, wholesale commerce and services are the most representative types (23.8% each). We registered more male (85.0%) than female (15.0%) business owners. Most of the respondents were between 36 and 45 years old (38.8%) and about 17.5% were aged between 25 and 35. In terms of education, about 67.7% has training and education at high school level.

Taking into consideration the literature review about organizational performance and typology of capitals, a satisfaction measure of SMEs' collaborators, is used for measuring non-economic performance.

The research focus is to determine whether the individual entrepreneurship capacity, measured through a typology of three capitals: human, social, and organizational; influence the non-economic organizational performance of SMEs.

First, for the dependent (or explained) variable related to non-economic organizational performance, the measure used was assessed by using items that ask collaborators about their degree of satisfaction with the organization and its respective performance. Here, a five point Likert scale was used, considering a range between a minimum level of 1 ("totally negative") and a maximum level of 5 ("totally positive").

Second, in initial terms, for quantifying the set of independent variables and according to the available information on the dataset, the human capital is qualified through the use of 14 variables, whereas the organizational capital is characterized by 27 variables, and social capital is measured through the use of 16 variables. All the variables were measured using a 5-point Likert scale, where the minimum level of 1 corresponds to “totally disagree,” whereas the maximum level of 5 corresponds to “totally agree.”

According to the available information on the database, the distinct types of capital considered in the current study are characterized through variables that are identified toward the use of a principal component analysis and the rotation method: Varimax with Kaiser normalization.

Based on this type of multivariate statistical analysis, a broad set of variables was reduced and combined in some dimensions that are likely explanatory. Also with the aim of extracting factors from the initial variables, the method of analysis of main components (Hair et al. 1998; Reis 2001) was adopted. The first factor emerging from the application of this method explains the greatest percentage of the total sample variance. The second factor corresponds to the second biggest percentage of the total variance and so on, finding no correlation between factors.

For providing consistency of results and an easier way of interpreting the factors, the procedure of orthogonal rotation, Varimax with Kaiser normalization, was applied, since it was seen to be sufficient to interpret the results and not having obtained substantially different results with two other procedures (quartimax and equamax). Finally, for checking the acceptability of the techniques, the Kaiser-Meyer-Olkin sample suitability measure, the Bartlett sphericity test, and the Cronbach’s alpha, were taken into consideration, in order to determine the consistency of the variables.

After identifying the principal components grouped according to the related significant factors, we opt for analyzing the relative weights of each factor and the correspondent constituting variables. Thus, an estimation process is developed, by making use of logistic regressions, in order to assess the relative weights of the significant estimators that influence the probability of reinforcing the collaborators’ satisfaction, that is, the non-economic organizational performance of the SMEs under analysis.

Toward the use of the Varimax rotation method, four significant factors were identified that include 15 variables. For assessing the strength and direction of the linear relationship among the variables to be considered in the current study, the Pearson correlation was computed (see the results presented below in Table 1).

Table 1 previously presented reports the correlations and descriptive statistics for the multi-item scales. It is important to note that entrepreneur’s intuition and the economic incentive as an incentive for accepting changes at work (variables representing human capital and organizational capital, respectively) are not correlated, contrary to what was expected.

Regarding the influence of debate with leaders about difficulties and subjects related to work, the results also denote that the former social capital variable does have only a consistent positive association with propensity for innovating activities

**Table 1** Descriptive statistics and Pearson correlations

Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. (HC) Entrepreneur's intuition	3.70	0.802	1														
2. (HC) Enthusiasm at work	3.84	0.719	-0.064	1													
3. (HC) Competences of human resources	4.16	0.803	0.214	0.331**	1												
4. (HC) Propensity for innovating activities	3.44	0.939	0.092	0.313**	0.475**	1											
5. (HC) Multiple skills of working groups	3.79	0.910	0.154	0.449**	0.256*	0.199	1										
6. (OC) Incentives for debate and dialogue in distinct areas among the teams	3.78	0.711	0.102	0.497**	0.398**	0.358**	0.453**	1									
7. (OC) Interdepartmental meetings for organizing the information and their needs, for avoiding duplicate information	3.72	0.927	-0.112	0.444**	0.418**	0.532**	0.350**	0.615**	1								
8. (OC) Use of external indicators, for detecting needs and room for improving changes at work	3.38	0.919	-0.034	0.476**	0.362**	0.350**	0.233*	0.363**	0.390**	1							
9. (OC) No resistance to changes at work	3.34	1.018	-0.014	0.439**	0.273**	0.214	0.352**	0.334**	0.207	0.418**	1						
10. (OC) The economic incentive is the incentive most valued, for accepting changes at work	3.35	1.020	0-130	-0.008	0.208	0.116	0.027	0.058	0.103	0.169	0.068	1					
11. (SC) Adequate level of information about the values, objectives, and performance of enterprise	4.00	0.796	-0.079	0.531**	0.416**	0.339**	0.262*	0.447**	0.498**	0.467**	0.281*	-0.031	1				

12. (SC) Working groups are plenty capable for taking decisions about their work	3.74	0.807	0.190	0.383**	0.457**	0.404**	0.509**	0.623**	0.460**	0.356**	0.294**	0.051	0.493**	1			
13. (SC) Promoting actions for an open and respectable environment, by giving collaborators a chance for expressing their feeling and problems	4.11	0.693	0.175	0.468**	0.149	0.273*	0.500**	0.565**	0.482**	0.211	0.250*	0.140	0.275*	0.438**	1		
14. (SC) Debate with leaders about the difficulties and subjects related with work	4.10	0.668	-0.132	-0.045	-0.054	0.232*	0.077	0.128	0.393**	0.041	0.024	0.134	0.191	0.167	0.139	1	
15. (SC) Mechanisms for evaluating the execution of objectives	3.71	0.903	0.002	0.453**	0.240*	0.165	0.387**	0.489**	0.554**	0.330**	0.258*	0.111	0.370**	0.381**	0.275*	0.006	1

Notes: N = 80

\* $p < 0.05$

\*\* $p < 0.01$

( $\rho = 0.232$ ) and interdepartmental meetings for organizing the information and their needs, in order to avoid duplicate information ( $\rho = 0.393$ ).

It should also be stressed that concerning the relationship between enthusiasm at work (human capital) and the remaining variables under consideration, the Pearson correlation coefficient (cf. Table 1) indicates that this variable has a negative, although not significant relationship with the variable representing debate with leaders about difficulties and subjects related with work ( $\rho = -0.045$ ).

The variables about the distinct types of capital considered in this study based on the mean importance measure reveal how the mean is higher for the following variables: “competences of human resources” (e.g. 4.16); “promoting actions for an open and respectable environment, by giving collaborators a chance for expressing their feeling and problems” (e.g. 4.11); and “debate with leaders about the difficulties and subjects related to work” (e.g. 4.10). Another relatively highly ranked variable is “adequate level of information about the values, objectives, and performance of enterprise” (e.g. 4.00). Therefore, the variables previously referred have average values equal or higher to 4, is mostly referred to as “agree” or “totally agree” at the time of choosing the factors associated with different types of capital. It is clear that the highest ranked variables are concerned with share of information among collaborators. Organizational culture and enterprise identity are also important variables in the current analysis. The findings show a high number of factors that entrepreneur can use for improving non-economic organizational performance of SMEs, based on individual entrepreneurship capacity. However, factorial analysis only allows us to conclude that entrepreneurs are motivated by factors associated distinct types of capital: human, social, and organizational.

## 4 Empirical Results

Toward the use of a principal component analysis and by making use of the Varimax rotation method, according to the results displayed in Table 2 presented below, four significant components were identified. The factors 1 and 2 present Cronbach’s alphas superior to 0.75, that is, 0.760 and 0.803, respectively, which guarantee a high **reliability** of the **psychometric** instruments that are under consideration in the two first factors previously identified. In what respects the factors 3 and 4, the values obtained for the Cronbach’s alphas are inferior to 0.75, nevertheless they provide a reasonable reliability of the instruments as well considered in the 2-second factors identified.

As noted earlier, the 15 variables represent a number of overlapping perspectives. From using the technique of factorial analysis, four factors were produced which make good conceptual sense and explained a total of 61.87% of the observed variance, as shown in Table 2 presented below. The remainder of this section discusses the interpretation of each of these factors.

The factor 1 includes the three different types of capital used in the analysis, namely, (1) human capital (enthusiasm at work, propensity for innovating activities);

**Table 2** Principal component and factor analysis: evaluating determinants of non-economic performance

Variables	Descriptive statistics		Components			
	Mean	Std. Deviation	Factor 1	Factor 2	Factor 3	Factor 4
(SC) Adequate level of information about the values, objectives, and performance of enterprise	4.00	0.796	0.671			
(SC) Mechanisms for evaluating the execution of objectives	3.71	0.903	0.444	0.483		
(OC) Use of external indicators, for detecting needs and room for improving	3.38	0.919	0.758			
(OC) No resistance to changes at work	3.34	1.018	0.579			
(HC) Enthusiasm at work	3.84	0.719	0.673			
(HC) Propensity for innovating activities	3.44	0.939	0.404			0.496
(OC) Incentives for debate and dialogue in distinct areas among the teams	3.78	0.711		0.691		
(SC) Working groups are plenty capable for taking decisions about their work	3.74	0.807		0.615		
(SC) Promoting actions for an open and respectable environment, by giving collaborators a chance for expressing their feeling and problems	4.11	0.693		0.795		
(HC) Multiple skills of working groups	3.79	0.910		0.771		
(OC) Interdepartmental meetings for organizing the information and their needs, for avoiding duplicate information	3.72	0.927			0.600	
(SC) Debate with leaders about the difficulties and subjects related with work	4.10	0.668			0.853	
(OC) The economic incentive is the incentive most valued, for accepting changes at work	3.35	1.020				0.611
(HC) Entrepreneur's intuition	3.70	0.802				0.619
(HC) Competences of human resources	4.16	0.803				0.613
Eigenvalues			5.336	1.398	1.331	1.215
Percentage of explained variance			35.574	9.322	8.875	8.103
Percentage of cumulative variance			35.574	44.896	53.771	61.874
Cronbach's alpha			0.760	0.803	0.543	0.497

N, 80; KMO, 0.779; Bartlett's test, 442.713; df, 105; sig. Level,  $p = 0.000$

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(2) social capital (adequate level of information about the values, objectives and performance of enterprise, mechanisms for evaluating the execution of objectives); and (3) organizational capital (use of external indicators, for detecting needs and room for improving, no resistance to changes at work).

The same three types of capital, although with different variables, are considered in the factor 2, which is constituted as follows: (1) human capital (multiple skills for working groups); (2) social capital (mechanisms for evaluating the execution of objectives, working groups are plenty capable for taking decisions about their work, promoting actions for an open and respectable environment); and (3) organizational capital (incentives for debate and dialogue in distinct areas among the teams).

The factor 3 embraces social capital and organizational capital that are represented by two distinct variables from the one previously identified, that is, debate with leaders about the difficulties and subjects related with work; and interdepartmental meetings for organizing the information and their needs, in order to avoid duplicate information, respectively.

In an analogous way to the precedent one, the factor 4 is constituted by human capital (entrepreneur's intuition; competences of human resources; propensity for innovating activities) and organizational capital (the economic incentives are the most valued, for accepting changes at work), although the first type of capital is more represented than the second identified.

According to what has been previously defined as one of the steps of the empirical strategy, the answer (or dependent) variable relative to non-economic organizational performance is a binary one, which is equal to 1, if the collaborators' satisfaction is higher, or equal to 0, if the collaborators' satisfaction is lower<sup>3</sup>. This way, taking into consideration the information about the principal components, for each one of the four factors identified, a logistic regression model for evaluating the non-economic organizational performance is used. The estimation process is based on the maximum likelihood procedure.

For the factor 1, the following model specification is tested:

$$NEOP_i = \beta_0 + \beta_1 FAC1_i + \beta_2 ADI_i + \beta_3 ME_i + \beta_4 EI_i + \beta_5 NRC_i + \beta_6 EW_i + \beta_7 PIA_i + \varepsilon_i \quad (1)$$

Where:  $NEOP_i$ , Non-economic organizational performance;  $FAC1_i$ , Factor 1;  $ADI_i$ , Adequate level of information;  $ME_i$ , Mechanisms for evaluating;  $EI_i$ , External indicators;  $NRC_i$ , No resistance to changes;  $EW_i$ , Enthusiasm at work;  $PIA_i$ , Propensity for innovating activities; and  $\varepsilon_i$ , Error term.

The estimators of the model relative to factor 1 are presented below in Table 3. According to the Wald statistics, we detect that only the estimators of the regression parameters relative to "adequate level of information" ( $ADI$ ) and "enthusiasm at work" ( $EW$ ) are statistically significant up to 10%. From the comparison between the predicted values and the observed values of the answer variable, we find out that the model relative to factor 1, presents a predictive capacity of 90.0%. The Chi-square test comprises 21.224, with a proof value of 0.003 that is clearly inferior to a 5%

**Table 3** Logit regression model results for non-economic performance: factor 1

Model	Parameter estimator	S.E.	Wald	Sig.	Exp (B)
<i>Factor 1</i>	0.204	0.902	0.051	0.821	1.226
(SC) Adequate level of information about the values, objectives, and performance of enterprise	-1.406	0.801	3.077	0.079**	0.245
(SC) Mechanisms for evaluating the execution of objectives	0.348	0.525	0.440	0.507	1.417
(OC) Use of external indicators, for detecting needs and room for improving	0.942	0.651	2.094	0.148	2.565
(OC) No resistance to changes at work.	0.460	0.430	1.141	0.285	1.584
(HC) Enthusiasm at work	1.695	0.887	3.646	0.056**	5.444
(HC) Propensity for innovating activities	-0.185	0.514	0.129	0.720	0.831
Constant	-3.483	5.007	0.484	0.487	0.031
Model summary					
Correct predict (overall %)	90.0%				
Chi-square	21.224			0.003	
Log-likelihood	42.840				
Number of cases (n)	80				

\* Significance level: 5%

\*\* Significance level: 10%

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significance level. The log-likelihood statistic, comprising 42.840, also corroborates the global significance of the model when compared with the null model. The results reveal that only two variables that constitute factor 1 and are associated with non-economic organizational performance present a negative signal. This is observed for the variables: “adequate level of information” (*ADI*); and “propensity for innovating activities” (*PIA*), although we do not find evidences of statistical significance for the later one.

In what concerns factor 2, the following model specification is tested:

$$NEOP_i = \beta_0 + \beta_1 FAC2_i + \beta_2 ME_i + \beta_3 IDD_i + \beta_4 WGTDi + \beta_5 ORE_i + \beta_6 MSWG_i + \varepsilon_i \tag{2}$$

Where: *NEOP<sub>i</sub>*, Non-economic organizational performance; *FAC2*, Factor 2; *ME<sub>i</sub>*, Mechanisms for evaluating; *IDD<sub>i</sub>*, Incentives for debate and dialogue; *WGTDi*, Working groups are plenty capable for taking decisions; *ORE<sub>i</sub>*, Open and respectable environment; *MSWG<sub>i</sub>*, Multiple skills of working groups; and *ε<sub>i</sub>*, Error term.

In Table 4 presented below, we display the estimators of the model relative to factor 2. Taking as reference the Wald statistics, for a 5% significance level, the only significant estimator to be considered is “incentives for debate and dialogue” (*IDD*). Moreover, the predictive capacity of the model relative to factor 2 is 87.5%. The

**Table 4** Logit regression model results for non-economic performance: factor 2

Model	Parameter estimator	S.E.	Wald	Sig.	Exp (B)
<i>Factor 2</i>	-0.661	0.965	0.468	0.494	0.516
(SC) Mechanisms for evaluating the execution of objectives	0.427	0.461	0.857	0.355	1.532
(OC) Incentives for debate and dialogue in distinct areas among the teams	2.003	0.804	6.216	0.013*	7.414
(SC) Working groups are plenty capable for taking decisions about their work	-0.596	0.654	0.831	0.362	0.551
(SC) Promoting actions for an open and respectable environment, by giving collaborators a chance for expressing their feeling and problems	0.465	0.875	0.282	0.595	1.592
(HC) Multiple skills of working groups	0.344	0.607	0.322	0.571	1.411
Constant	-7.804	6.287	1.541	0.214	0.000
Model summary					
Correct predict (overall %)	87.5				
Chi-square	12.899			0.045	
Log-likelihood	51.165				
Number of cases (n)	80				

\* Significance level: 5%

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Chi-square test comprises 12.899, with a proof value of 0.045, which is smaller than the 5% significance level. The log-likelihood statistic, comprising 51.165, corroborates the global significance of the model when compared with the null model.

The results also reveal that among the variables associated with non-economic organizational performance, a part the own factor 2, only the variable concerning “working groups capable for taking decisions” (*WGTD*), presents a negative signal. Although they are not significant in statistical terms, all the remaining variables present a positive signal, namely, “mechanisms for evaluating” (*ME*), “incentives for debate and dialogue” (*IDD*), “open and respectable environment” (*ORE*), and “multiple skills of working groups” (*MSWG*).

Relative to factor 3, the following model specification is considered:

$$NEOP_i = \beta_0 + \beta_1 FAC3_i + \beta_2 IDM_i + \beta_3 DL_i + \varepsilon_i \quad (3)$$

Where: *NEOP<sub>i</sub>*, Non-economic organizational performance; *FAC3*, Factor 3; *IDM<sub>i</sub>*, Interdepartmental meetings for organizing the information and their needs; *DL<sub>i</sub>*, Debate with leaders; and *ε<sub>i</sub>*, Error term.

Next, in Table 5, the results in what concerns the estimators of the model relative to factor 3 are presented. Following the criterion provided by the Wald statistics, we detect significant estimators associated with factor 3 (*FAC3*) and “debate with leaders” (*DL*), at a 5% significance level. It should be stressed that the former presents a negative signal, whereas the later one denotes a positive signal. For the

**Table 5** Logit regression model results for non-economic performance: factor 3

Model	Parameter estimator	S.E.	Wald	Sig.	Exp (B)
<i>Factor 3</i>	-2.359	0.980	5.800	0.016*	0.095
(OC) Interdepartmental meetings for organizing the information and their needs, for avoiding duplicate information	1.728	0.606	8.131	0.004*	5.630
(SC) Debate with leaders about the difficulties and subjects related with work	-0.143	1.026	0.019	0.890	0.867
Constant	-3.090	5.096	0.368	0.544	0.045
Model summary					
Correct predict (overall %)	86.2%				
Chi-square	19.566			0.000	
Log-likelihood	44.498				
Number of cases (n)	80				

\* Significance level: 5%

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model relative to factor 3, a predictive capacity of 86.2% is detected. The Chi-square test is equal to 19.566, with a highly significant proof value of 0.000. When contrasting the significance of the model relative to factor 3 with the one presented by the null model, we find out a log-likelihood statistic, comprising 44.498, which corroborates its global significance.

Lastly, in terms of the factor 4, the following model specification is tested:

$$NEOP_i = \beta_0 + \beta_1 FAC4_i + \beta_2 EIMV_i + \beta_3 EI_i + \beta_4 CHR_i + \beta_5 PIA_i + \varepsilon_i \quad (4)$$

Where: *NEOP<sub>i</sub>*, Non-economic organizational performance; *FAC4*, Factor 4; *EIMV<sub>i</sub>*, Economic incentive most valued; *EI<sub>i</sub>*, Entrepreneur’s intuition; *CHR<sub>i</sub>*, Competences of Human Resources; *PIA<sub>i</sub>*, Propensity for innovating activities; and *ε<sub>i</sub>*, Error term.

In Table 6 presented below, the estimators of the model relative to factor 4 are displayed. According to the decision criterion provided through the use of the Wald statistics, we detect that only the estimator relative to “economic incentive most valued” is not significant in statistical terms. Thus, the estimators associated with the “factor 4” (*FAC4*), the “entrepreneur’s intuition” (*EI*), and “competences of human resources” (*CHR*) are statistically significant up to 5%. For its turn, the estimator related to the variable that represents the “propensity for innovating activities” denotes a statistical significance, for a 10% level.

By comparing the predicted values and observed values of the answer variable relative to non-economic organizational performance, we find out that the model relative to factor 4 presents a predictive capacity of 86.2%. The Chi-square test is equal to 11.746, with a proof value of 0.038, which is smaller than the reference of 5% significance level. In relation to the global significance of the model, we find out that the log-likelihood statistic comprises 52.318, which corroborates the referred

**Table 6** Logit regression model results for non-economic performance: factor 4

Model	Parameter estimator	S.E.	Wald	Sig.	Exp (B)
<i>Factor 4</i>	-2.733	1.001	7.459	0.006*	0.065
(OC) The economic incentive is the incentive most valued, for accepting changes at work	0.896	0.580	2.385	0.122	2.449
(HC) Entrepreneur's intuition	1.910	0.796	5.752	0.016*	6.750
(HC) Competences of human resources	1.532	0.655	5.470	0.019*	4.628
(HC) Propensity for innovating activities	0.875	0.522	2.811	0.094**	2.399
Constant	-17.223	6.691	6.626	0.010*	0.000
Model summary					
Correct predict (overall %)	86.2%				
Chi-square	11.746			0.038	
Log-likelihood	52.318				
Number of cases (n)	80				

\* Significance level: 5%

\*\* Significance level: 10%

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global significance, when comparing with the performance of the null model. The results also reveal that the only estimator who has a negative signal is relative to “factor 4” (*FAC4*). Contrarily, the estimators associated with “entrepreneur's intuition” (*EI*) and “competences of human resources” (*CHR*) denote a positive signal associated with the behavior of the answer variable, that is, the non-economic organizational performance.

## 5 Discussion and Conclusions

This chapter analyses why the individual entrepreneurship capacity, flowing a cognitive process, is important for influencing the non-economic organizational performance of SMEs. For this purpose, from the literature review on the relationship between distinct types of capital and organizational performance of SMEs, it analyses the contribution of a set of dimensions representing human, social, and organizational capital that are used in testing the innovative concept of individual entrepreneurship capacity. According to the caveat previously identified in the literature, this is a first attempt to use a metrics relative to collaborators' satisfaction as a measure of non-economic performance, in order to shed some light on the role played by a cognitive entrepreneur type, on the determination of the organizational performance of SMEs. Moreover, the usefulness of the current study should be stressed in the sense that new insights are provided to policymakers, managers, and practitioners interested in small business management, for improving a neglected, although truly important, dimension of organizational performance, which is the one that depends on the collaborators' satisfaction.

The subsequent discussion of the results obtained from the estimation of logistic regressions follows equally the typology of individual capital determinants identified in the literature on entrepreneurship and small business management, and that is under test in the current study. In this sense, the human, social, and organizational capital determinants are going to be discussed in a subsequent way. In terms of human capital determinants, the results obtained through the estimation of logistic regression models relative to factors 1 and 4 reveal that taking as reference the behavior of the answer variable:

- The hypothesis *1a* cannot be rejected, since enthusiasm at work presents a positive and significant influence on non-economic organizational performance of SMEs, at a 10% significance level.
- The hypothesis *1b* can be rejected, since entrepreneur's intuition presents a positive and significant influence on non-economic organizational performance of SMEs, at a 5% significance level.
- The hypothesis *1c* cannot be rejected, since competences of human resources have a positive and significant influence on non-economic organizational performance of SMEs, at a 5% significance level.

Taking as reference the analysis of the marginal effects of each explanatory variable relative to distinct dimensions of the types of individual capital, first, it should be stressed that the cognitive entrepreneurs that bet in transmitting enthusiasm at work have an advantage of 5.444, when it comes to influence, in a positive way, the non-economic performance of the entrepreneurial unit. Thus, our results are consistent in relation to the different variables we used. This insight is in line with Brigham et al. (2007), who state that under a cognitive approach, at the individual level, enthusiasm at work can be a specific resource for the non-economic performance.

Second, the intuition of a cognitive entrepreneur also plays a determinant role in the sense that it represents a success rating of improving the non-economic performance of 6.750. In other words, the cognitive entrepreneur that use his intuition in managing and linking scarce resources of capital has a capability for improving the non-economic performance that is 6.750 greater than those that do not use this cognitive and individual approach based on their own intuition. In our analysis, entrepreneur's intuition seems to be important in determining non-economic performance, which is in accordance with the visions of Brigham et al. (2007) and Crossan et al. (1999).

Third, the importance of the competences of human resources should also be underlined, since the cognitive entrepreneur that manages highly qualified human capital with multifaceted and complementary competences has a capability for influencing in a positive way the non-economic performance, that is, 4.628 greater than the one that doesn't own this strategic dimension of individual capital.

Considering the behavior of the answer variable, in what concerns the social capital determinants, the results obtained through the estimation of logistic regression models relative to factors 1, 2, and 3 denote that:

- The hypothesis *2a* can be rejected, since available information about the values, objectives, and performance of enterprise influence negatively the non-economic organizational performance of SMEs, at a 10% significance level.

Toward the analysis of the marginal effects associated with the variable “available information,” it is possible to state that the entrepreneur that make public to collaborators information on values objectives and performance of the SME has a disadvantage of 0.245, which is intended to be capable of influencing negatively the non-economic performance of the organization. However, this result is contrary to the previous findings of Coleman (1988), and Pedler et al. (1989).

In the context of social capital variables that were considered in the ambit of the hypotheses *2b* and *2c*, firstly, it should be stressed that the creation of working groups for decision-making purposes does not present statistical significance, although the value obtained through the estimation of the logistic regression, suggests a negative influence on the non-economic organizational performance of SMEs that is contrary to the previous findings of Glaeser et al. (2002), and Bygrave and Timmons (1992). Secondly, in relation to the variable representing “open and participative environment for debating with leaders about the difficulties and subjects related with work,” we do not find evidences of statistical significance of the associated estimator, although the estimation’s results suggest a potential positive influence on the non-economic organizational performance.

Lastly, in terms of organizational capital, the estimators associated with the correspondent variables included in the factors *1*, *2*, *3*, and *4* reveal that taking as reference the behavior of the answer variable:

- The hypothesis *3a* cannot be rejected, since interdepartmental meeting have a positive and significant influence on non-economic organizational performance of SMEs, at a 5% significance level.

The marginal effect of the explanatory variable “interdepartmental meetings” should be noted, since the cognitive entrepreneur that promote this type of multifunctional meetings has an advantage of 5.630, when it comes to influence, in a positive way, the non-economic performance of SMEs. This result is in the same line as the one proposed by Milgrom and Roberts (1995) and Collins and Porras (1994).

In what concerns the organizational capital variables that were considered in the ambit of the hypotheses *3b* and *3c*, both estimators do not present statistical significance, although it is suggested a potential positive influence of economic incentives and use of external indicators on the non-economic organizational performance of SMEs.

The current analysis presents two main limitations. First, due to the availability of information, only one measure of non-economic organizational performance is used for testing the role played by distinct dimensions of individual entrepreneurship capacity. In future research this issue should be, primarily, addressed. Second, the possibility of controlling for the technological profile of the entrepreneurial units is

limited, due to the inexistence of information in the current version of the database that is used in the current study.

This chapter provides several insights and policy implications for public and private managers, in terms of the dissemination of a *rationale* for a cognitive entrepreneur, especially in what concerns small business management.

For policymakers, the design of formal programs oriented to the reinforcement of the propensity for promoting cognitive and learning organizations, is recommended. In the organizational context of SMEs, the entrepreneur should be considered as the main player, and further specific education on coaching and motivation practices oriented to the dissemination of enthusiasm will be very welcome, for addressing the need for promoting a positive and open environment among collaborators.

To the attention of managers and practitioners, the results previously presented and discussed are important in the sense that they provide an innovative contribution for better understanding the importance of improving the non-economic organizational performance, especially by promoting the role played by a cognitive entrepreneur, through the dissemination of enthusiasm, and by making use of intuition in managing multifaceted and complementary competences of human resources, under a basis of cooperative interdepartmental meetings within a SMEs' framework.

In future researches, we intend to expand the database, for making possible the use of alternative measures of non-economic organizational performance and other estimation tools, such as, hierarchical regression methods and structural equation modeling. This will aim fundamentally to assess the influence of moderator variables and interaction terms and to identify the causality relationships established between the non-economic organizational performance of SMEs and other unexplored determinants at the level of individual entrepreneurship capacity, for example, the director, ideological, supporter, religious, and ethnic capital.

### Notes

1. For classifying the entrepreneurial units as SMEs, the following criterion is used: less than 250 employees.
2. The results for heteroscedasticity and autocorrelation tests are also provided upon request to the authors.
3. As it was mentioned before in item "3. Data and empirical strategy" for measuring the degree of collaborators' satisfaction with the organization and respective performance. A 5-point Likert scale was used, considering a range between a minimum level of 1 ("totally negative") and a maximum level of 5 ("totally positive"). The process for transforming the numeric variable into a binary one was made by considering 1, for collaborators that have presented higher satisfaction degrees equal to 5 or 4. For its turn, we considered 0, for the cases of collaborators that revealed lower levels of satisfaction, that is, three, two, or one.



## References

- Aghion, P., & Howitt, P. (1992). A model of growth through creative destruction. *Econometrica*, 60, 323–351.
- Akçomak I., & Weel B. (2008). The impact of social capital on crime: Evidence from the Netherlands. *IZA Discussion Paper* N.o 3603, IZA Bonn.
- Alchian, A., & Demsetz, H. (1972). Production, information costs, and economic organization. *American Economic Review*, 62, 777–795.
- Anderson, E. (1990). Two firms, one frontier: On assessing joint venture performance. *Sloan Management Review*, 31, 19–30.
- Arthur, J. (1994). Effects of human resource systems on manufacturing performance and turnover. *Academy of Management Journal*, 37, 670–687.
- Bailey T. (1993). *Organizational innovation in the apparel industry*. Industrial.
- Barney, J. (2002). *Gaining and Sustaining Competitive Advantage (2nd edn)*. Upper Saddle River, NJ: Pearson Education.
- Barro, R., & Lee, J. (1993). International comparisons of educational attainment. *Journal of Monetary Economics*, 32, 363–394.
- Barro R., & Lee J. (2000). International data on educational attainment: Updates and implications. *CID Working Paper*, 42, Harvard University.
- Becker, G. (1964). *Human Capital*. Chicago: University of Chicago Press.
- Begley, T., & Boyd, D. (1987). Psychological characteristics associated with performance in entrepreneurial firms and smaller businesses. *Journal of Business Venturing*, 2, 79–93.
- Bourdieu, P. (1986). The forms of capital. In J. Richardson (Ed.), *Handbook of theory and research for the sociology of education* (pp. 241–258). New York: Greenwood Press.
- Brigham, K., De Castro, J., & Shepherd, D. (2007). A person-organization fit model of owner-managers' cognitive style and organizational demands. *Entrepreneurship Theory and Practice*, 31, 29–51.
- Bucklin, L., & Sengupta, S. (1993). Organizing successful co-marketing alliances. *Journal of Marketing*, 57, 32–46.
- Bygrave, W., & Timmons, J. (1992). *Venture Capital at the Crossroads*. Boston, MA: Harvard Business School Press.
- Cerchione, R., & Esposito, E. (2017). Using knowledge management systems: A taxonomy of SME strategies. *International Journal of Information Management*, 37(1), 1551–1562.
- Chong, H. (2008). Measuring performance of small-and-medium sized enterprises: The grounded theory approach. *Journal of Business and Public Affairs*, 2, 1–10.
- Coleman, J. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94, 95–210.
- Collins, J., & Porras, J. (1994). *Built to last: Successful habits of visionary companies*. New York: Harper Business.
- Covin, J., & Slevin, D. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10, 75–87.
- Crossan, M., Lane, H., & White, R. (1999). An organizational learning framework: From intuition to institution. *Academy of Management Review*, 24, 522–537.
- Davidsson, P. (1991). Continued entrepreneurship: Ability, need and opportunity as determinants of small firm growth. *Journal of Business Venturing*, 6, 405–429.
- Delaney, J., & Huselid, M. (1996). The impact of human resource management practices on perceptions of organisational performance. *Academy of Management Journal*, 39, 949–969.
- Dess, G., & Picken, J. (1999). *Beyond productivity: How leading companies achieve superior performance by leveraging their human capital*. New York: American Management Association.
- DiMaggio, P., & Mohr, J. (1985). Cultural capital, educational attainment, and marital selection. *American Journal of Sociology*, 90, 1231–1261.

- Dumay, J., & Garanina, T. (2013). Intellectual capital research: A critical examination of the third stage. *Journal of Intellectual Capital*, 14(1), 10–25.
- Dunlop, J., & Weil, D. (1996). Diffusion and performance of modular production in the U.S. apparel industry. *Industrial Relations*, 35, 334–354.
- Flap, H., & de Graaf, N. (1986). Social capital and attained occupational status. *The Netherlands Journal of Sociology*, 22, 145–161.
- Fratoe, F. (1988). Social Capital of Black Business Owners. *Review of Black Political Economy*, 16, 33–50.
- Geringer, J., & Hebert, L. (1991). Measuring performance of international joint ventures. *Journal of International Business Studies*, 22, 249–263.
- Glaeser, E., Laibson, D., & Sacerdote, B. (2002). An economic approach to social capital. *The Economic Journal*, 112, 437–458.
- Gompers, P., Kovner, A., Lerner, J., & Charfstein, D. (2008). Venture capital investment cycles: The impact of public markets. *Journal of Financial Economics*, 87, 1–23.
- Guiso, L., Sapienza, P., & Zingales, L. (2004). The role of social capital in financial development. *The American Economic Review*, 94, 526–556.
- Hair, J., Anderson, R., Tatham, R., & Black, W. (1998). *Multivariate Data Analysis* (5th ed.). Upper Saddle River: Prentice-Hall.
- Hsu, D. (2007). Experienced entrepreneurial founders, organizational capital, and venture capital funding. *Research Policy*, 36, 722–741.
- Ichniowski, C., Shaw, K., & Prennushi, G. (1997). The effects of human resource management practices on productivity. *The American Economic Review*, 87, 291–313.
- Jacques, R. (1992). Critique and theory building: Producing knowledge from the kitchen. *Academy of Management Review*, 17, 582–606.
- Jensen, M., & Meckling, W. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics*, 3, 305–360.
- Johannisson, B. (1993). Designing supportive contexts for emerging enterprises. In J. B. Karlsson & D. Storey (Eds.), *Small business dynamics: International, national and regional perspectives*. London: Routledge.
- Kandel, E., & Lazear, E. (1992). Peer pressure and partnerships. *Journal of Political Economy*, 100, 801–817.
- Kelley, M. (1994). Information technology and productivity: The elusive connection. *Management Science*, 40, 1406–1425.
- Kelley, M. (1996). Participative bureaucracy and productivity in the machined products sector. *Industrial Relations*, 35, 374–399.
- Kirby, J. (2005). *Toward a theory of high performance* (pp. 30–39). July–August: Harvard Business Review.
- Knack, S., & Keefer, P. (1997). Does social capital have an economic payoff? A cross country investigation. *Quarterly Journal of Economics*, 112, 1251–1288.
- Lang, J. W., Kersting, M., Hülshager, U. R., & Lang, J. (2010). General mental ability, narrower cognitive abilities, and job performance: The perspective of the nested-factors model of cognitive abilities. *Personnel Psychology*, 62, 595–640.
- Leitão, J., & Franco, M. (2010). On the evaluation of SME performance from a human and organizational capital perspective. *International Journal of Entrepreneurship and Small Business*, 10, 108–130.
- Leseure, M., Shaw, N., & Chapman, G. (2001). Performance measurement in organizational networks: An exploratory case study. *International Journal of Business Performance Management*, 3, 30.
- Levine, D. (1995). *Reinventing the workplace: How businesses and employees can both win*. Washington DC: Brookings Institution.
- Lourey, G. (1977). A dynamic theory of racial income difference. In P. Wallace & A. LaMond (Eds.), *Women, minorities, and employment discrimination* (pp. 153–186). Lexington: Lexington Books.

- Lu, J., & Beamish, P. (2006). Partnering strategies and performance of SMEs' international joint ventures. *Journal of Business Venturing*, 21, 461–486.
- Lucas, R. (1988). On the mechanics of economic development. *Journal of Monetary Economics*, 22, 3–42.
- Mankiw, N., Romer, D., & Weil, D. (1992). A contribution to the empirics of economic growth. *The Quarterly Journal of Economics*, 107, 407–437.
- March, J., & Sutton, R. (1997). Organizational performance as a dependent variable. *Organization Science*, 8, 698–706.
- Milgrom, P., & Roberts, J. (1995). Complementarities and fit: Strategy, structure and organizational change in manufacturing. *Journal of Accounting and Economics*, 19, 179–208.
- Miller, A., Willson, B., & Adams, M. (1988). Financial performance patterns of new corporate ventures: An alternative to traditional measures. *Journal of Business Venturing*, 3, 287–299.
- Mohr, J., & Spekman, R. (1994). Characteristics of partnership success: Partnership attributes communication behavior, and conflict-resolution techniques. *Strategic Management Journal*, 15, 135–152.
- Nahapiet J., & Ghoshal S. (1997). Social capital, intellectual capital and the creation of value in firms. *Academy of Management Best Paper Proceedings*, 35–39.
- O'Farrell, P. (1986). The nature of new firms in Ireland: Empirical evidence and policy implications. In D. Keele & E. Wever (Eds.), *New firms and regional development in Europe* (pp. 151–183). London: Croom Helm.
- Orser, B., Hogarth-Scott, S., & Riding, A. (2000). Performance, firm size and management problem solving. *Journal of Small Business Management*, 38, 42–58.
- Osland, G., & Cavusgil, S. (1996). Performance issues in U.S.-China joint ventures. *California Management Review*, 38, 106–130.
- Osterman, P. (1987). Choice of employment systems in internal labour markets. *Industrial Relations*, 26, 48–63.
- Park, S., & Ungson, G. (1997). The effect of national culture, organizational complementarity, and economic motivation on joint venture dissolution. *Academy of Management Journal*, 40, 279–307.
- Pedler, M., Boydell, T., & Burgoyne, J. (1989). Towards the learning company. *Management Education and Development*, 20, 1–8.
- Peters, T., & Waterman, R. (1982). *In search of excellence* (Vol. 32, pp. 30–48). New York: Harper & Row. Relations.
- Reis E. (2001). *Estatística Multivariada Aplicada*. Edições Sílabo.
- Richard P., Devinney T., Yip G., & Johnson G.. (2008), *Measuring organizational performance as a dependent variable: Towards methodological best practice* (September 26, 2008). Available at SSRN: <http://ssrn.com/abstract=814285>
- Robinson, P., & Sexton, E. (1994). The effect of education and experience on self-employment success. *Journal of Business Venturing*, 9, 141–156.
- Romer, P. (1990). Endogenous technological change. *Journal of Political Economy*, 98, 71–102.
- Roper, S. (1996). Entrepreneurial characteristics, strategic choice and small business performance. *Small Business Economics*, 11, 11–24.
- Rumelt, R. (1984). Towards a strategic theory of the firm. In R. Lamb (Ed.), *Competitive strategic management* (pp. 556–570). Englewood Cliffs: Prentice-Hall.
- Sandberg, W., & Hofer, C. (1987). Improving new venture performance: The role of strategy, industry structure and the entrepreneur. *Journal of Business Venturing*, 2, 5–28.
- Sapienza, H., Smith, K., & Gannon, M. (1988). Using subjective evaluations of organizational performance in small business research. *American Journal of Small Business*, 2, 45–53.
- Shamdasani, P., & Sheth, J. (1995). An experimental approach to investigating satisfaction and continuity in marketing alliances. *European Journal of Marketing*, 9, 6–23.
- Shane, S., & Stuart, T. (2002). Organizational endowments and the performance of university start-ups. *Management Science*, 48, 154–170.
- Simon, H. (1976). *Administrative behavior* (3rd ed.). New York: Macmillan.

- Smith, J., & Barclay, D. (1997). *The effects of organizational differences and trust on the effectiveness of selling partner relationships* (pp. 3–17). January: Journal of Marketing.
- Smith, N., Bracker, J., & Miner, J. (1987). Correlates of firms and entrepreneur success in technologically innovative companies. In N. Churchill (Ed.), *Frontiers of entrepreneurship research* (pp. 57–71). Wesley, MA: Babson College Press.
- Stuart, T., Hoang, H., & Hybels, R. (1999). Interorganizational endorsements and the performance of entrepreneurial ventures. *Administrative Science Quarterly*, 44, 315–349.
- Subramaniam, R. (2017). Competing through strategic networks: The ebbs and flows of dynamic system. *International Journal of Business*, 22(4), 305–318.
- Wagner, J. (1994). Participation's effect on performance and satisfaction: A reconsideration of research evidence. *Academy of Management Review*, 19, 312–330.
- Youndt, M., Subramaniam, M., & Snell, S. (2004). Intellectual capital profiles: An examination of investments and returns. *Journal of Management Studies*, 41, 335–361.

# The Impact of Innovative Working Behaviour on Employees' Working Performance

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and Ramo Palalić

**Abstract** The aim of this chapter is to identify the relationship and the impact of innovative working behaviour (IWB) of employees on their performance. With innovative working behaviour, we are trying to analyse the initiative taken from employees for improving work and the effects over working performance (WP). Employees with a higher level of innovative behaviour are expected to be star performers in their working place. An organisation needs to increase the awareness of the importance of innovative working behaviour of their employee in working activity. The sample includes 214 respondents from the private and public sector in Macedonia. Based on our findings, we provide some useful recommendation to organisations to raise the awareness of innovation that comes from employee side. The chapter ends with study limitations and future research directions.

**Keywords** Innovative working behaviour · Working performance · Employees · Performance · Organisation · Organisation change · Gender · Public and private sector · Macedonia

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# 1 Introduction

The importance of innovation is noticed since the Schumpeter's time. Innovative working behaviour as a concept includes innovations in working activity of employees, who need to generate their own ideas, processes, procedures or products and implement them in their activity (West and Farr 1990; Spreitzer 1995; Tuominen and Toivonen 2011). According to Farr and Ford (1990), innovative work behaviour (IWB) shows how individuals achieve to initiate and intentionally introduce new ideas, processes, products or procedures in their work in order to improve their working performance. Several studies have concluded a positive correlation between IWB and working performance, including Dörner et al. (2012), Leong and Rasly (2014), Rexhepi and Berisha (2017) and Yuan and Woodman (2010). Creativity and innovative working behaviour are closely related; while creativity represents generating new ideas, working innovative behaviour represents creating and implementing new ideas but also adopting other ideas which are new for that particular work unit (Woodman et al. 1993).

This chapter examined the impact of innovative working behaviour on employee working performance in the Republic of Macedonia. The Republic of Macedonia is located in South-East Europe, i.e. Central Balkan Peninsula, and is one of the successor states of the former Yugoslavia. Republic of Macedonia declared its independence on September 8, 1991, while it became a member of the United Nations on April 8, 1993. As a result of a dispute with the southern neighbour, Greece, regarding the name issue, it was admitted under the provisional reference of the Former Yugoslav Republic of Macedonia, abbreviated as FYROM (United Nations 1993). Now, Greece and Macedonia are in the process of ending this dispute, and Macedonia will take the new name—The Republic of North Macedonia.<sup>1</sup> Macedonia covers 25,713 km<sup>2</sup> (9928 square miles), bordering Albania, Kosovo, Serbia, Bulgaria and Greece. The capital is Skopje, the largest city of the Republic of Macedonia, inhabited by 30% of the total population. According to State Statistical Office of the Republic of Macedonia (2016), based on the data from the last Census of Population, Households and Dwellings in 2002, the Republic of Macedonia had 2,022,547 inhabitants, which is 3.9% more compared with the Census in 1994 and 43% more compared with the Census in 1948. Population of Republic of Macedonia according to ethnic group, based on Census 2002, consists of Macedonians, 1,297,981 (64.2%); Albanians, 509,083 (25.2%); Turks, 77,959 (3.9%); Romani, 53,879 (2.7%); Serbs, 35,939 (1.8%); Bosnians/Muslims, 19,571 (0.9%); and others, 30,688 (1.4%) (Ramadani et al. 2018). The gross domestic

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<sup>1</sup>Based on Prespa Agreement, reached on June 17, 2018, by Greek Prime Minister Alexis Tsipras and his Macedonian counterpart, Zoran Zaev, the Republic of Macedonia should change its name to the Republic of North Macedonia. At the moment when this chapter was submitted to the editors/publisher (Friday, January 11, 2019), the Parliament of the Republic of Macedonia with 81 votes approved and passed all amendments to the constitution to rename the country to Republic of North Macedonia. Now this agreement should be approved by the Greek Parliament in order to be effective.

product (GDP) in 2017 was 11.34 billion US dollars which represents 0.02 percent of the world economy. The GDP in 1992 was only 2.32 billion US dollars which is the lowest from its independence (State Statistical Office of the Republic of Macedonia 2016).

The employees who have higher innovative working behaviour, respectively, have good working environment and feel free to present and implement their new ideas, processes and/or products, they usually achieve higher level of performance, in comparison with those with low level of innovative working behaviour. Based on a sample of 214 employees, working in private and public sector, we have analysed the correlation and the impact of IWB on working performance. In this particular study, it was analysed the effect of gender in indexes of innovative working behaviour and working performance, to show if there are any differences between males and females. The respondents were employees in private and public sector; in addition the effect of working in private sector versus public sector over indexes of IWB and WP and the correlation of the same will be looked at.

The chapter is structured as follows. After the introduction comes literature review, which provides a thorough description of IWB and work performance; the following section is methodology and data analysis, and the chapter ends with conclusion, discussion and recommendation for future research direction.

## 2 Literature Review

According to Andrew and de Ven (1986), the importance and impact of innovative behaviour on organisational effectiveness is widely accepted. In dynamic business environment, employee innovative behaviour such as developing, adapting and implementing new ideas for products and work methods is an important asset which enables organisation to succeed (Kanter 1983). De Jong and Hartog (2007, p.20) define innovative work behaviour (IWB) as “the intentional behaviour of an individual to introduce and/or apply new ideas, products, processes, and procedures to his/her work role, unit, or organisation”. Innovative work behaviour (IWB) presents how individuals achieved to initiate and intentionally introduce new ideas, processes, products or procedures in their work in order to improve their working performance (Farr and Ford 1990). According to De Jong and Hartog (2010), IWB is integrated from four interrelated sets of behavioural activities, namely, as (1) problem recognition, (2) idea generation, (3) idea promotion and (4) idea realisation, which indicates employee's ability to innovate. Several definitions and explanations are provided in Table 1.

Dörner et al. (2012) suggest that innovative working behaviour is positively related to task performance. Greg and Anne (1996) proof that innovative behaviour of employees is of great significance to organisational effectiveness and survival. Based on Leong and Rasly's (2014) studies done for Malaysia Automotive Organisation, innovative working behaviour has positive correlation with employee performance with regression coefficient of 0.740. Yuan and Woodman (2010)

**Table 1** Definitions of IWB

Author(s)	IWB definition
West and Farr (1990)	The intentional introduction and application within a role, group or organisation of ideas, processes, products or procedures, new to the relevant unit of adoption, designed to significantly benefit the individual, the group, organisation or wider society
Spreitzer (1995)	Innovative behaviours reflect the creation of something new or different. Innovative behaviours are by definition change-oriented because they involve the creation of a new product, service, idea, procedure, or process
Janssen (2000)	IWB is defined here as the intentional creation, introduction and application of new ideas within a work role, group or organisation, in order to benefit role performance, the group, or the organisation
Dorenbosch et al. (2005)	IWB concerns the willingness by individual employees to constitute on-the-job innovations—for example, the upgrading of ways of working, communication with direct colleagues, the use of computers, or the development of new services or products
Carmeli et al. (2006)	Innovative behaviour is defined here as a multiple-stage process in which an individual recognises a problem for which she or he generates new (novel or adopted) ideas and solutions, works to promote and build support for them, and produces an applicable prototype or model for the use and benefit of the organisation or parts within it
Tuominen and Toivonen (2011)	We understand innovation and change activities as all activities that aim at contributing to the creation and utilisation of beneficial novelties in an organisation

Source: Based on De Spiegelaere et al. (2018)

conducted a research with 287 employees in US companies. One of the specified hypotheses was related to outcome expectations and innovative behaviour, where these two factors were positively related with 0.33 coefficient of correlation.

Individual innovation as a concept is defined in various ways. According to Hurt et al. (1977), individual innovation was considered to be personality-based. The authors defined individual innovation as the generalised willingness to change. On the other hand, West (1987) investigated the role of innovation on the amount of changes individuals have initiated in their work, which can be regarded as an output-based measure.

## 2.1 Facts of Personal Initiative

There are several facts related to personal initiative of employee. Frese and Fay (2001) grouped these facts into four action sequences: goals/redefinition of tasks; information collection and prognosis; plan and execution; and monitoring and feedback. Their characteristics are presented in Table 2.



**Table 2** Facts of personal initiative

<b>Action sequences</b>	<i>Self-starting</i>	<i>Proactive</i>	<i>Overcome barriers</i>
<i>Goals/redefinition of task</i>	Active goal, redefinition	Anticipate future problems and opportunities and convert into goal	Protect goals when frustrated or taxed by complexity
<i>Information collection and progress</i>	Active search, i.e. exploration, active scanning	Consider potential problem areas and opportunities before they occur Develop knowledge on alternative routes of action Back up plans	Maintain search in spite of complexity and negative emotions; overcome barriers
<i>Plan and execution</i>	Active plan	Have action plans for opportunities ready	Return to plan quickly when disturbed
<i>Monitoring and feedback</i>	Self-developed feedback and active search for feedback	Develop pre-signals for potential problems and opportunities	Protect feedback search

Source: Based on Frese and Fay (2001)

How will employees have innovative behaviour in their working activity depends on the way they are managed from their leaders. We have two well-known leadership styles which have two different effects on employee innovative behaviour—transformational leadership and transactional leadership. Bass (1985) and Yukl (1999) define transformational leadership as a style of leadership that transforms followers to raise their self-interest by altering their moral, ideals, interest and values, motivating them to perform better than initially expected. In contrast transactional leadership is defined as style of leadership in which the leader makes clear what is expected of followers. The leader entails serving as a role model and sacrificing self-gain for collective gain, thereby stimulating followers to do the same. Inspirational motivation involves expressing an energising vision. Intellectual stimulation is expressed by encouraging followers to question the status quo, and the final component, individualised consideration, entails providing support for the individual development needs of follower (Pieterse et al. 2009).

According to Deci and Ryan (as cited in Pieterse et al. 2009), transactional leadership can be argued to be negatively related to innovative behaviour because it is focused more on in-role performance and less on the stimulation of novel activities. Additionally, as transactional leadership clarifies expectations and gives feedback about meeting these expectations, it will indicate the leader’s predilections. The perception of these leader preferences is likely to have some bearing on followers, diverting them from their own innovative endeavours. Moreover, transactional leadership may be perceived as controlling and demotivating, causing less innovative behaviour.

## 2.2 *The Resistance of Employee for Organisational Change*

Based on Scheck and Kinicki (2000), the negative employee reactions are most common in the context of organisational changes. Negative employee reactions can be detrimental for organisation since they are commonly associated with harmful outcomes, such as employee withdrawal (as cited in Peus et al. 2009) and reduced performance (Weeks et al. 2005).

Some authors also have given some explanations regarding the resistance of employees on organisational change. According to Ashford et al. (1989), the employees are resistant to change due to *uncertainty*; this is explained as a position to which the outcome of changes is not known, and the employees feel that they lose the work control. Based on Nadler (2011) and Peus et al. (2009), the employees show their resistance to change as a result of *fear of failure*. The fear of failure is understood as a situation when employees are scared to deal with new technology and new techniques of working. Research shows that it is very crucial for employees to be able to make sense of organisational structure and procedure and in particular the changes they are faced with in order to develop commitment (Nadler 2011).

Based on Hammer et al. (2014), some of the reasons why employees are resisting changing are belief that the change initiative is a temporary fad; belief that fellow employees or managers are incompetent; loss of authority or control; loss of status or social standing; lack of faith in their ability to learn new skills; feeling of change overload (too much too soon); lack of trust in or dislike of managers; loss of job security; loss of family or personal time; and feeling that the organisation is not entitled to extra effort (as cited on Berisha (2015)).

## 3 Methodology and Data Analysis

### 3.1 *Methodology*

Methodology was based on Dana and Dana's (2005) recommendations. Primary data was collected by distribution of questionnaires to private and public organisations in the Republic of Macedonia, respectively, in 134 private and 15 public organisations. The questionnaire was sent directly (hard copy) and via email. The questionnaire was prepared in three different languages: English, Albanian and Macedonian. We have sent approximately 550 questionnaires in 3 different languages, and 214 respondents positively answered to our request. Based on gender, we have 108 female respondents and 157 male respondents.

### 3.2 Data Analysis

Data analysis is performed through SPSS. The database is created based on questionnaire as per description above. Two variables were analysed: the index of innovative working behaviour and the index of working performance. Indexes of IWB and WP range from 1.00 to 4.00, where 1.00 is for the lowest level of index and 4.00 is the highest level of index. The index is earned based on the response for questions in IWB and the response for questions in working performance. Descriptive statistics are provided in Table 3.

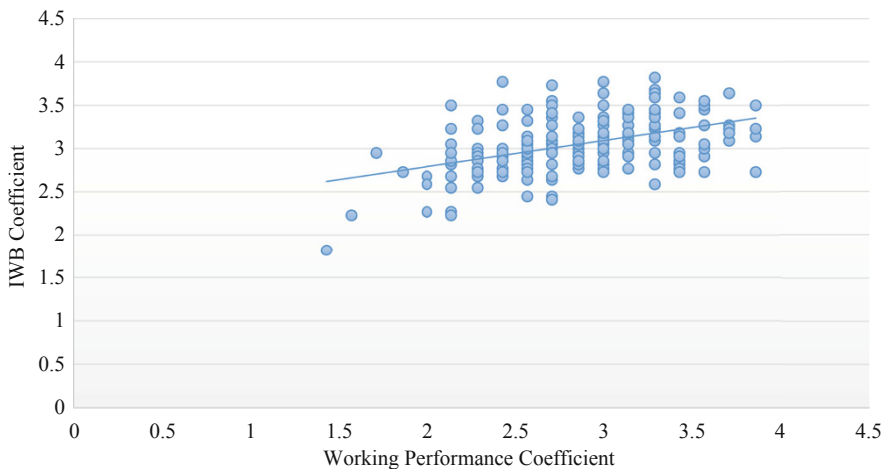
#### 3.2.1 Correlation Between Innovative Working Behaviour and Working Performance

Scatter plot chart represents the relationship between IWB and working performance of 214 employees included in this research. Figure 1 shows the tendency of two variables, IWB and WP.

According to the Pearson Correlation Index, as indicated in Table 4, two variables IWB and WP are positively correlated with coefficient of 0.451 and significant at the

**Table 3** Descriptive statistics

	N	Minimum	Maximum	Mean	Std. deviation
IWB	214	1.43	3.86	2.8836	0.46391
WP	214	1.82	3.82	3.0497	0.31151
Valid N (listwise)	214				



**Fig. 1** Scatter plot between IWB and WP

**Table 4** Pearson Correlation Index

		IWB	WP
IWB	Pearson correlation	1	0.451 <sup>a</sup>
	Sig. (2-tailed)		0.000
	N	214	214
WP	Pearson correlation	0.451 <sup>a</sup>	1
	Sig. (2-tailed)	0.000	
	N	214	214

<sup>a</sup>Correlation is significant at the 0.01 level (2-tailed)

**Table 5** Model summary

Model	R	R square	Adjusted R square	Std. error of the estimate
1	0.451 <sup>a</sup>	0.204	0.200	0.27857

<sup>a</sup>Predictors: (Constant), IWB

**Table 6** Regression coefficients

Coefficients <sup>a</sup>						
Model		Unstandardised coefficients		Standardised coefficients	t	Sig.
		B	Std. error	Beta		
1	(constant)	2.190	0.118		18.525	0.000
	IWB	0.301	0.041	0.451	7.361	0.000

<sup>a</sup>Dependent variable: WP

0.01 level. This means that employees with higher coefficient of IWB in the same time have higher coefficient in WP.

Coefficient 0.451, in significant level 0.01, is a very good result for taking under consideration the importance of IWB in WP. The performance of the entire company depends on the employees' working performance.

### 3.2.2 Linear Regression Analysis

All the data was analysed through SPSS and was mainly used to find the effects of IWB on working performance (WP). From linear regression analysis, the impact of IWB on working performance was analysed. So, it was measured how an increase in IWB will affect WP (Tables 5 and 6).

From the obtained data, two main indexes are divided as below:

*Dependent variable:* working performance (WP)

*Independent variable:* innovative working behaviour (IWB)

The linear regression model is as follows:

$$WP = \beta_0 + \beta_1 IWB \tag{1}$$

The regression model after getting the results is as follows:

- $\beta_0 = 2.19,$
- $\beta_1 = 0.301.$

$$WP = 2.19 + 0.301IWB$$

Results show that at 1 value increase of IWB index, we have increase in WP for 0.301—the coefficient is significant in 0.01 level. This proves that employees with higher level of IWB achieve higher level of WP. This result indicates and should motivate leaders (of private and public organisations) to focus and increase the importance of innovative behaviour in working activities. IWB is changeable and can be improved by creating good and healthy working environment for employees to be involved in all organisational activities. Each employee needs to be focused on the working activities and needs to show the interest in finding new ways and develop new processes for their work which will make better performance and show no or less resistance to organisational change. Organisations need to increase the awareness of the importance of IWB of their employees in working activity.

### 3.2.3 Gender Differences with Regard to the Correlation of IWB and WP

The distributed questionnaire was answered by 121 females and 93 males. Descriptive statistics shows that the mean coefficient of IWB of females is 2.87 in the range from 1 to 4 while 2.84 of males. Tables 7 and 8 show the correlation coefficients between IWB and WP indexes for female and male employees.

The correlation results, which provide information on how much is the coefficient of one variable related with the coefficient of the other variable; in this case they show that female IWB index and WP index are positively correlated—the coefficient of 0.459 is higher than the coefficient of all indexes together. With regard to male employee, we also have a coefficient of positive correlation of 0.443. Like the mean of IWB indexes between males and females, the correlation indexes are in favour of

**Table 7** Pearson correlation between IWB and WP indexes for female employees

<b>Correlations</b>			
		IWB female	WP female
IWB female	Pearson correlation	1	0.459 <sup>a</sup>
	Sig. (2-tailed)		0.000
	N	121	121
WP female	Pearson correlation	0.459 <sup>a</sup>	1
	Sig. (2-tailed)	0.000	
	N	121	121

<sup>a</sup>Correlation is significant at the 0.01 level (2-tailed)

**Table 8** Pearson correlation between IWB and WP indexes for male employees

<b>Correlations</b>			
		IWB male	WP male
IWB male	Pearson correlation	1	0.443 <sup>a</sup>
	Sig. (2-tailed)		0.000
	N	93	93
WP male	Pearson correlation	0.443 <sup>a</sup>	1
	Sig. (2-tailed)	0.000	
	N	93	93

<sup>a</sup>Correlation is significant at the 0.01 level (2-tailed)

**Table 9** Pearson correlation between IWB and WP indexes of employees in private sector

<b>Correlations</b>			
		IWB private	WP private
IWB private	Pearson correlation	1	0.529 <sup>a</sup>
	Sig. (2-tailed)		0.000
	N	109	109
WP private	Pearson correlation	0.529 <sup>a</sup>	1
	Sig. (2-tailed)	0.000	
	N	109	109

<sup>a</sup>Correlation is significant at the 0.01 level (2-tailed)

female employees as well. Thus, it can be concluded that females, even with small difference in results, show more innovative work behaviour in comparison to males. Further, the IWB impacts more the WP of females rather than males.

### 3.2.4 IWB and WP of Employee in Public Versus Private Sector

From the questionnaire respondents, 109 of them were employed in private sector and 105 in public sector. The mean index of IWB of private sector employees is 2.85, while the mean index of public sector employees is 2.87, which shows that index of employees that work in public sector is a little bit higher. Tables 9 and 10 indicate the correlations between IWB and WP in private and public organisations.

Even the mean of IWB shows that employees in public sector have slightly more innovative work behaviour index compared with employees in private sector, but the mean of WP is in favour of employees in private sector, with mean of 3.06 compared with employees in public sector with mean of 3.04. In addition, the correlation coefficient that shows how much are IWB and WP correlated between workers in public and private sector indicates that IWB and WP of employees in private sector have higher coefficient of correlation with 0.529 compared with employees in public sector with 0.356. Both results are significant in 0.01 level. These results indicate that even though employees in public sector have high level of IWB which may be caused by working environment, they have less level of index in WP, which caused the correlation to be lower than employees in private sector. On the other hand,

**Table 10** Pearson correlation between IWB and WP of indexes of employees in public sector

<b>Correlations</b>			
		IWB public	WP public
IWB public	Pearson correlation	1	0.356 <sup>a</sup>
	Sig. (2-tailed)		0.000
	N	105	105
WP public	Pearson correlation	0.356 <sup>a</sup>	1
	Sig. (2-tailed)	0.000	
	N	105	105

<sup>a</sup>Correlation is significant at the 0.01 level (2-tailed)

employees in the private sector have less mean index of IWB, but in correlation with WP, they have showed more positive results, so the level of IWB has impacted more the WP. As per the results, in public sector, they are more innovative; however, this is not used to provide more performance results in comparison with employees in private sector. Since we have positive correlation in both groups in significant level, with small differences, it means that the level of IWB impacts the level of WP; the more IWB employees we have, the better performers they are in both groups of employees.

## 4 Conclusion

The world is changing fast, and the winners are those who provide innovation to the market (Ramadani et al. 2019). The focus in innovation is not only part of top management, but the same needs to be combined with all levels of organisations. The working force is the main power of company, and very often, they know better what kind of innovations will improve their work performance. According to our results, IWB has a positive correlation with WP of employees, i.e. IWB has a positive impact on WP. Organisations need to raise the awareness to create healthy working environment for employees by giving them space to generate and present new ideas, procedures and products/services which will improve their work. Employees with higher level of innovative behaviour are pretended or expected to be “star” performers in their working place. This will bring about a win-win situation, where organisations will increase the effectiveness of their overall working performance while employees will have increased self-satisfaction and motivation in order to achieve higher level of performance. Our result of positive correlation between IWB and WP with coefficient of 0.451 corresponds with those of Leong and Rasly (2014) and Yuan and Woodman (2010).

In this chapter, the gender perspective was analysed as well. It was concluded that females, even with small difference, have higher mean of IWB index and, at the same time, they have higher positive correlation of IWB and WP, compared with males. We have analysed also the indexes of employees in private versus public

sector. The mean of IWB index of employees in public sector is higher than the index of employees in private sector. Coefficients of correlation between IWB and WP are positive in both types of employees, but employees in private sector have higher coefficient of correlation between IWB and WP compared with employees in public sector. Even though it is shown that employees in public sector are more innovative, this does not give better performance result compared with employees in private sector; this is concluded by mean of WP of employees in both types of organisations.

For future studies, we recommend investigating between management style and their effect on IWB. Another important element which can be combined with employees' innovative working behaviour is the level of satisfaction that they have and motivation for work. This might be an interesting topic for research in the future.

## References

- Andrew, H., & de Ven, V. (1986). Central problems in the management of innovation, management science. *Organization Design*, 32(5), 590–607.
- Ashford, S. J., Lee, C., & Bobko, P. H. (1989). Content, causes, and consequences of job insecurity: A theory-based measure and substantive test. *The Academy of Management Journal*, 32(4), 803–829.
- Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York: The Free Press.
- Berisha, B. (2015). *The effects of emotional intelligence in managing changes.*, Master Thesis.
- Carmeli, A., Meitar, R., & Weisberg, J. (2006). Self-leadership skills and innovative behavior at work. *International Journal of Manpower*, 27(1), 75–90.
- Dana, L. P., & Dana, T. E. (2005). Expanding the scope of methodologies used in entrepreneurship research. *International Journal of Entrepreneurship and Small Business*, 2(1), 79–88.
- De Jong, J., & Hartog, N. D. (2007). How leaders influence employees' innovative behaviour. *European Journal of Innovation Management*, 10(1), 41–64.
- De Jong, J., & Hartog, N. D. (2010). Measuring innovative work behaviour. *Creativity and Innovation Management*, 19(1), 23–36.
- De Spiegelaere, S., Van Gyes, G., & Van Hootegem, G. (2018). Innovative work behaviour and performance-related pay: Rewarding the individual or the collective? *International Journal of Human Resource Management*, 29(12), 1900–1919.
- Dorenbosch, L. W., Van Engen, M. L., & Verhagen, M. (2005). On-the-job innovation: The impact of job design and human resource management through production ownership. *Creativity and Innovation Management*, 14(2), 129–141.
- Dörner, N., Gassmann, O., & Morhart, F. (2012). *Innovative work behavior: The roles of employee expectations and effects on job performance* (Doctoral dissertation). St. Gallen: University of St. Gallen.
- Farr, F., & Ford, C. (1990). Individual Innovation. In M. A. West & J. L. Farr (Eds.), *Innovation and creativity at work: Psychological and organisational strategies*. Chichester: Wiley.
- Frese, M., & Fay, D. (2001). Personal initiative: An active performance concept for work in the 21st century. *Research in Organizational Behavior*, 23(2), 133–187.
- Greg, R. O., & Anne, C. (1996). Employee creativity: Personal and contextual factors at work. *The Academy of Management Journal*, 39(3), 607–634.
- Hammer, L. B., et al. (2014). Changing work and work family conflict: Evidence from the work, family, and health network. *American Sociological Review*, 79(3), 485–516.



- Hurt, H. Y., Joseph, K., & Cook, C. D. (1977). Scales for the measurement of innovativeness. *Human Communication Research, 4*, 58–65.
- Janssen, O. (2000). Job demands, perceptions of effort reward fairness and innovation work behavior. *Journal of Occupational and Organizational Psychology, 73*(1), 287–302.
- Kanter, R. M. (1983). *The change masters: Innovation for productivity in the American corporation*. New York: Simon & Schuster.
- Leong, T. C., & Rasly, A. (2014). The relationship between innovative work behavior on work role performance: An empirical study. *Procedia - Social and Behavioral Sciences, 129*(1), 592–600.
- Nadler, R. (2011). *Leading with emotional intelligence: Hands-on strategies for building confident and collaborative star performers* (1st ed.). New York: McGraw-Hill Education.
- Peus, C., Frey, D., Gerhardt, M., Fischer, P., & Traut-Mattausch, E. (2009). Leading and managing organizational change initiatives. *Management Review, 20*(2), 158–175.
- Pieterse, A. N., Knippenberg, D. V., Schippers, M., & Stam, D. A. (2009). Transformational and transactional leadership and innovative behavior: The moderating role of psychological empowerment. *Journal of Organizational Behavior, 31*(4), 609–623.
- Ramadani, V., Hisrich, D. R., Abazi-Alili, H., Dana, L.-P., Panthi, L., & Abazi-Bexheti, L. (2019). Product innovation and firm performance in transition economies: A multi-stage estimation approach. *Technological Forecasting and Social Change, 140*(C), 271–280. <https://doi.org/10.1016/j.techfore.2018.12.010>.
- Ramadani, V., Rexhepi, G., Dana, L.-P., Gërguri-Rashiti, S., & Ratten, V. (2018). Entrepreneurship in Macedonia. In R. Palalić, L.-P. Dana, & V. Ramadani (Eds.), *Entrepreneurship in former Yugoslavia* (pp. 67–89). Cham: Springer.
- Rexhepi, G., & Berisha, B. (2017). The effects of emotional intelligence in employees' performance. *International Journal of Business and Globalisation, 18*(4), 467–479.
- Scheck, C. L., & Kinicki, A. J. (2000). Identifying the antecedents of coping with an organizational acquisition: A structural assessment. *Journal of Organizational Behavior, 21*(1), 627–648.
- Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management Journal, 38*(5), 1442–1465.
- State Statistical Office of the Republic of Macedonia. (2016). *Macedonia in figures*. Skopje: Government of Republic of Macedonia.
- Tuominen, T., & Toivonen, M. (2011). Studying innovation and change activities in KIBS through the lens of innovative behaviour. *International Journal of Innovation Management, 15*(02), 393–422.
- United Nations. (1993). *Admission of the State whose application is contained in document A/47/876-S/25147 to membership in the United Nations* [online]. Retrieved November 22, 2012 from <http://www.un.org/documents/ga/res/47/a47r225.htm>
- Weeks, J. W., Heimberg, R. G., Fresco, D. M., Hart, T. A., Turk, C. L., Schneier, F. R., & Liebowitz, M. R. (2005). Empirical validation and psychometric evaluation of the brief fear of negative evaluation scale in patients with social anxiety disorder. *Psychological Assessment, 17*(2), 179–190.
- West, M. A. (1987). A measure of role innovation at work. *British Journal of Social Psychology, 26*, 83–85.
- West, M. A., & Farr, J. L. (1990). Innovation at work. In M. A. West & J. L. Farr (Eds.), *Innovation and creativity at work: Psychological and organizational strategies* (pp. 3–13). Chichester: Wiley.
- Woodman, R. W., John, E. S., & Ricky, W. G. (1993). Toward a theory of organizational creativity. *The Academy of Management Review, 18*(2), 293–321.
- Yuan, F. R., & Woodman, R. W. (2010). Innovative behavior in the workplace: The role of performance and image outcome expectations. *The Academy of Management Journal, 53*(2), 323–342.
- Yukl, G. (1999). An evaluation of conceptual weaknesses in transformational and charismatic leadership theories. *Leadership Quarterly, 10*, 285–305.

# Strategic Entrepreneurship and Its Effect on Human Capital and Employee Retention

Claudine Kearney

**Abstract** Our knowledge of strategic entrepreneurship continues to grow. However, this knowledge remains more limited in the context of strategic entrepreneurship effects on human capital and employee retention. Herein, the contribution of strategic management and entrepreneurship to strategic entrepreneurship is examined. Building on previous models a conceptual framework of strategic entrepreneurship is proposed to extend our understanding of its effect on human capital and employee retention as well as the human capital and employee retention impact on strategic entrepreneurship. Therefore, the model incorporates human capital and employee retention that effects strategic entrepreneurship and its outcomes in terms of value creation and generation of wealth.

**Keywords** Strategic management · Entrepreneurship · Strategic entrepreneurship · Human capital · Employee retention · Value · Wealth

## 1 Introduction

In today's challenging, complex, dynamic, and competitive environment, the interface between strategic management and entrepreneurship provides important insights into the management of entrepreneurial organizations. Strategic management and entrepreneurship are dynamic processes that are focused on the creation of value and generation of wealth. A relevant concept integrating these two areas is "strategic entrepreneurship," defined as taking entrepreneurial actions with strategic perspectives (Hitt et al. 2001b). Strategic entrepreneurship has been recognized as a fundamental role in new value creation demonstrated by innovative employees undertaking operational activities (e.g., Burgelman 1983; Burgelman and Hitt 2007; Covin and Miles 2007;

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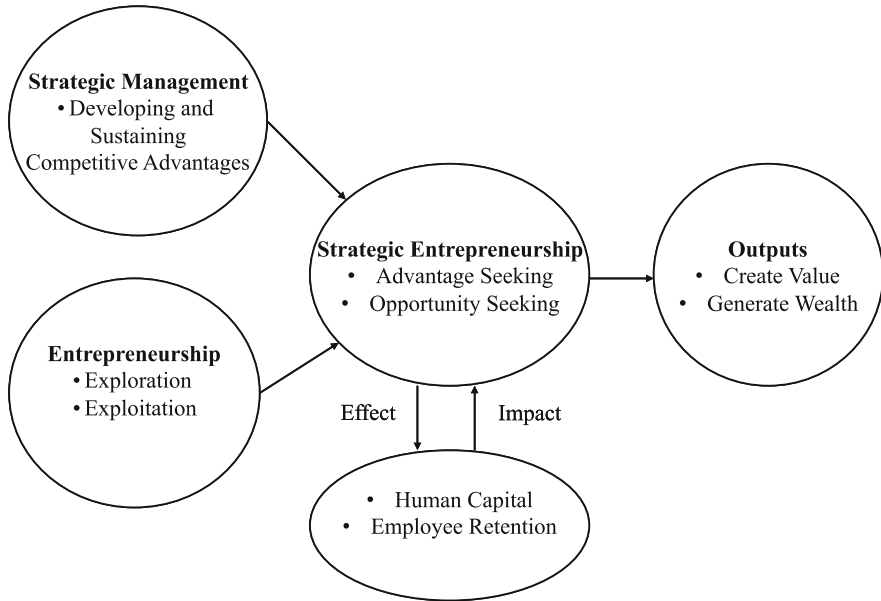
Inkpen and Choudhury 1995; Kuratko et al. 1990). There is variation in an organization's ability to achieve both elements of strategic entrepreneurship, while some are more effective at managing the existing and others at creating the new (Kearney and Morris 2015). However, despite the challenges of stable and unstable environments, strategic entrepreneurship must be achieved simultaneously. The more complex the environment, the more entrepreneurial organizations must become to identify new opportunities, sustain competitiveness, create value, and generate wealth.

To emerge within this complex and challenging environment requires strategic entrepreneurship. Human capital is the origin of strategic entrepreneurial behaviors (Ireland et al. 2003). Human capital in terms of individual employees' knowledge, skills, and abilities in addition to their drive and passion to achieve is fundamental for the organization to identify and exploit opportunities and achieve competitiveness, create value, and generate wealth. Human capital has developed as a highly utilized theoretical lens to provide a better understanding of entrepreneurship (Marvel et al. 2014). Human capital is a fundamental driver of entrepreneurial success. If managerial roles are not carefully designed and orchestrated, the outcome can result in excessive stress, poor job performance, and wealth erosion (Upson et al. 2007). Thus, in addition to the right human capital, employee retention is fundamental for strategic entrepreneurship and the success of its outcomes.

The purpose of this chapter is to provide scholarly discourse on strategic entrepreneurship as an organizational construct and its effect on human capital and employee retention. Having defined the scope and objective of this chapter, first, the following section proposes a conceptual model of strategic entrepreneurship to extend our understanding of the effect of the strategic entrepreneurship construct on human capital and employee retention. Second, an overview of the strategic management and entrepreneurship perspective along with an understanding of the integration between them in what is termed "strategic entrepreneurship" to achieve competitive advantage, create value, and generate wealth through opportunity exploration and exploitation is shown. Third, human capital and employee retention is discussed. Following that, the effect of strategic entrepreneurship on human capital and employee retention is reviewed as well as the impact of human capital and employee retention on strategic entrepreneurship which in turn affects the outcomes of strategic entrepreneurship. The final section of this chapter presents its conclusion.

## 2 Conceptual Framework

The strategic entrepreneurship model presented in Fig. 1 identifies strategic entrepreneurship as a distinct organizational strategy and its effect on human capital and employee retention. The proposed model suggests that strategic entrepreneurship is manifested through the presence of strategic management and entrepreneurship. This model implies that strategic entrepreneurship affects human capital and employee



**Fig. 1** Strategic entrepreneurship model: A conceptual model proposal

retention and in turn human capital and employee retention has an impact on strategic entrepreneurship that in turn affect the strategic entrepreneurship outcomes.

## 2.1 Strategic Management Perspective

Strategic management is specific goal-oriented actions undertaken by an organization to gain and sustain superior organizational performance. Hitt et al. (2011: 6) defined strategic management as “the full set of commitments, decisions, and actions required for a firm to achieve strategic competitiveness and earn above-average returns.” Within strategic management, “the sustainability of competitive advantage is recognized as an important determinant of firm performance” (Ireland 2007: 7). Therefore, scholars of strategic management aim to achieve a greater understanding of the main causes of any performance differentials among organizations (Ireland et al. 2003). Achieving effective competitive positioning is a key determinant of the organization’s ability to create value and wealth for stakeholders and society (Ketchen et al. 2007; Porter 1980). More specifically, at the core of strategic management is creating competitive advantages and wealth (Chen et al. 2010). Therefore, having a comprehensive knowledge of strategic management enables management to view the organization in its entirety and position the organization for superior performance.

There is no universal strategy that can be applied to organizations. The core essence of strategy is being unique. The field of strategic management deals with both intended and emergent initiatives undertaken by senior management involving the utilization of human capital and appropriate resources to enhance the organizations' performance and competitiveness, create value, and generate wealth. Strategic management needs to develop a strategy that focuses on the best ways for the organization to create and sustain a competitive advantage while simultaneously identifying and developing new opportunities (Hisrich and Kearney 2013).

Strategic management integrates analysis, formulation, implementation, and evaluation and control in its pursuit of competitive advantage and superior performance. *Strategic analysis* is monitoring, evaluating, and disseminating of information from the internal, competitive, and external environments. Therefore, strategic management must focus beyond the current internal, competitive, and external environment and envisage the organization's market position in the short, medium, and long term. This requires the ability to evaluate the resources and core competencies in terms of how they can be utilized to create new sources of value. *Strategic formulation* is a process of investigation, analysis, and decision-making that provides the organization with the criteria for achieving and sustaining competitive advantage. This includes defining the competitive advantages of the business (Strategy), crafting the corporate mission, specifying achievable objectives, and setting policy guidelines (Wheelen et al. 2014). *Strategic implementation* is a process by which strategies and policies are put into action through the development of programs, budgets, and procedures (Wheelen et al. 2014). *Evaluation and control* requires the monitoring of corporate activities and performance results so that actual performance can be compared with desired performance. If there is a gap between the actual and desired results, this needs to be evaluated, and corrective action needs to be undertaken. Thus, effective strategic actions, which are undertaken in the context of a carefully integrated strategy analysis, formulation, implementation, and evaluation and control, result in desired strategic outcomes. Strategic management is not just a strategy or a plan but a way of thinking for the sustainable competitiveness, value, and wealth of the organization.

## 2.2 *Entrepreneurship Perspective*

Historically, the term entrepreneurship has referred to the individual who recognizes opportunities and takes on the challenge of exploiting that opportunity into a successful business enterprise. While some definitions focus on the creation of new organizations, some focus on the generation of wealth and ownership and others on discovery and exploiting opportunities. Entrepreneurship is the dynamic process of generating incremental wealth and stimulating the surrounding environment. This wealth is generated by individuals who have the willingness to take personal and professional risks, including equity, time, and career.

There is no acceptable universal definition of entrepreneurship. Entrepreneurship is a phenomenon that takes many forms such as private sector entrepreneurship, corporate entrepreneurship, public sector entrepreneurship (government entrepreneurship), and social entrepreneurship. Furthermore, entrepreneurs are found in all professions—education, medicine, research, law, architecture, engineering, social work, distribution, and government. While these forms and professions may be somewhat differentiated from each other, they do, however, include similar concepts, for example, exploration and exploitation of opportunities, creativity, innovation, and risk-taking. A broad definition of *entrepreneurship* and *corporate entrepreneurship* “is the process of creativity and innovation by committing the necessary time and energy, taking responsibility for all the risks and uncertainties, and taking personal satisfaction” (Hisrich and Kearney 2013: 9).

As a result of long-standing positions in the entrepreneurship literature, Shane and Venkataraman (2000: 218) describe entrepreneurship as “the scholarly examination of how, by whom, and with what effects opportunities to create future goods and services are discovered, evaluated, and exploited.” Within the field of entrepreneurship, opportunities are a core concept. Therefore, opportunities should be viewed as emerging through the constant shaping and development of (raw) ideas that are undertaken (Dimov 2007). More specifically, entrepreneurship can be defined as the “identification and exploitation of previously unexploited opportunities” (Hitt et al. 2001b: 480). Entrepreneurship is focused on seeking and exploiting new opportunities that will create value for the organization, customers, and stakeholders. For those business opportunities that exhibit low degrees of novelty, the exploration process should be shorter and exploitation be accelerated, and the reverse applies to those business opportunities that exhibit high degrees of novelty (Choi et al. 2008).

In recognizing the importance of entrepreneurship and its evolution into the twenty-first century, Kuratko (2009) developed an integrated definition that recognizes the critical factors required for this phenomenon:

Entrepreneurship is a dynamic process of vision, change, and creation. It requires an application of energy and passion towards the creation and implementation of new ideas and creative solutions. Essential ingredients include the willingness to take calculated risks, formulate an effective venture team, marshal the needed resources, build a solid business plan, and, finally, the vision to recognize opportunity where others see chaos, contradiction, and confusion, (Kuratko 2009: 5)

Entrepreneurial organizations create value by leveraging innovation to exploit new opportunities and to create new product-market domains (Miles 2005). The pursuit of entrepreneurial opportunities is concerned with the creation of new forms of economic value rather than refining or altering existing sources of value (Eckhardt and Shane 2003). Value must be created before wealth can be generated. Thus, a central function of entrepreneurship is generating wealth through value creation (Knight 1921). Entrepreneurial organizations need to build organizations for today’s work and tomorrow’s innovation.

### 2.3 *Integrating Strategic Management and Entrepreneurship*

Strategic management and entrepreneurship have generally developed independent of each other; however, they are both focused on organizational adaptation to environmental change and exploitation of opportunities created by uncertainties and discontinuities in the creation of wealth (Hitt and Ireland 2000; Venkataraman and Sarasvathy 2001). Strategic management and entrepreneurship are dynamic processes that are intended to enhance organizational performance (Kuratko and Audretsch 2009). Furthermore, they are process organizations that undertake to reduce and/or take advantage of uncertainty and ambiguity and generate more value and wealth (Hitt et al. 2011).

Strategic management provides the context for entrepreneurial actions (Ireland et al. 2001). Entrepreneurship involves exploring and exploiting entrepreneurial opportunities. However, to create the most value and generate wealth, entrepreneurial organizations must also think and behave strategically. This calls for an integration of entrepreneurial and strategic thinking. McGrath and MacMillan (2000) integrated the thinking from strategic management and entrepreneurship in the development of their entrepreneurial mindset concept. By emphasizing an entrepreneurial mindset, leaders aim to achieve and sustain competitive advantage for the organization. Hamel (2000) argues that managers can enhance the possibility of new wealth-creating strategies inside their organizations by dreaming, exploring, creating, pioneering, and inventing. Strategic capabilities can reflect the organizations' ability to "pool their various business, functional, and personal expertise to make the choices that shape the major strategic moves of the firm" (Eisenhardt and Martin 2000: 1107). It is an ability to envision all the organization's resources and capabilities and determine how they can be effectively and distinctively synergized to generate new sources of value and wealth. Entrepreneurial capabilities have been defined as the "ability to identify and acquire the necessary resources to act upon opportunities identified in the market, or to create new market opportunities" (Karra et al. 2008: 443). While strategic management focuses on achieving competitive advantage and entrepreneurship focuses on the exploration and exploitation of opportunities, the integration of these two disciplines achieves something much bigger. Thus, "strategic entrepreneurship is the integration of entrepreneurial (i.e. opportunity seeking behavior) and strategic (i.e. advantage seeking) perspectives in developing and taking actions designed to create wealth" (Hitt et al. 2001b: 481). The integration of those two disciplines is supported by the way opportunity and advantage-seeking behaviors are seen as complementary.

The integration of strategic management and entrepreneurship is a vision-directed strategic analysis with a core focus on entrepreneurial behaviors that continuously develop the organization through the exploration and exploitation of innovative entrepreneurial opportunities that result in value creation and sustained competitive advantage. Strategic management and entrepreneurship "are concerned about growth, creating value for customers, and subsequently creating wealth for owners" (Hitt and Ireland 2005: 228) and multiple stakeholders, including society at large

(Schendel and Hitt 2007). In today's global competitive environment, the most successful strategies are those that are integrated with entrepreneurial activities that create superior value and generate wealth.

Through strategic entrepreneurship, leaders can develop strategies that focus on (1) sustained competitive advantages that are a core part of strategic management and (2) exploration and exploitation of opportunities that future competitive advantages can be developed and sustained. It is the simultaneous use of existing advantages and the identification of future opportunities that sustain competitive advantage and the ability to continuously create value and generate wealth. The integration is beneficial for all organizations in today's dynamic, competitive environment. Organizations that can develop competitive advantages today while exploring and exploiting opportunities to cultivate tomorrow's advantages increase their chance of sustained competitiveness and value and wealth in the long term.

### 2.3.1 The Concept of Strategic Entrepreneurship

Research into strategic entrepreneurship began to develop in the twenty-first century (Hitt et al. 2001b; Ireland et al. 2001). Since 2001, research on strategic entrepreneurship has grown at a rapid pace (e.g., Ireland et al. 2001; Ireland and Webb 2009; Kuratko and Audretsch 2009, 2013; Meyer et al. 2002). Strategic entrepreneurship is a form of corporate entrepreneurship (Morris et al. 2011), which is concerned with an organization's ability to better perform current activities or operations (exploitation) while at the same time seeking new opportunities (exploration) (Ireland et al. 2009), resulting in individual, organizational, and/or societal value. More specifically, "strategic entrepreneurship allows the firm to apply its knowledge and capabilities in the current environmental context while exploring for opportunities to exploit in the future by applying new knowledge and new and/or enhanced capabilities" (Hitt et al. 2011: 69). However, some scholars have adopted a more generic conceptualization of the term strategic entrepreneurship—that is, one in which a multitude of specific phenomena may be involved (Stokvik et al. 2016). Similarly, this multiple-phenomena perspective is reflected in Covin and Kuratko's (2010: 208) observation that:

strategic entrepreneurship approaches have as their commonality the exhibition of large-scale or otherwise highly consequential innovations that are adopted in the firm's pursuit of competitive advantage. These innovations may or may not result in new businesses for the corporation. With strategic entrepreneurship approaches, innovation can be in any of five areas—the firm's strategy, product offerings, served markets, internal organization (i.e., structure, processes, and capabilities), or business model.

In spite of inherent conflicts that arise between the forces of stability and change, strategic entrepreneurship argues they must be accomplished simultaneously, although the relative emphasis on one or the other is context-specific and changes over time (Volberda et al. 2001). However, it is a challenge to achieve this balance because organizations frequently have limited resources and need to determine the level of resources they can allocate to exploit current opportunities versus those



allocated to explore future opportunities. Thus, the effectiveness of strategic entrepreneurship achieving competitiveness, value, and wealth is dependent on human capital and the organizations' ability to attract and retain high-caliber management and employees.

## ***2.4 Human Capital***

The theory of human capital was originally developed to study the economic value of education (Becker 1964; Schultz 1960) and demonstrates that people possess varying skills, knowledge, and experience that have economic value (Marvel 2013). Human capital is a critical resource for organizations, because without people with the right knowledge, skills, and abilities, the organization will cease to exist. Human capital has been defined as the "individual capabilities, knowledge, skill, and experience of the company's employees and managers, as they are relevant to the task at hand, as well as the capacity to add to this reservoir of knowledge, skills, and experience through individual learning" (Dess and Lumpkin 2001: 26).

The strength of human capital is that it possesses most of the knowledge in an organization, particularly the tacit knowledge that is unique and difficult to imitate. Human capital represents the acquired knowledge, skills, and capabilities of a person that allow for unique and novel actions (Coleman 1988). The essence of human capital is the intelligence and competencies of the organization's human resources, which significantly contribute to the achievement of competitive advantage. According to Chandler (1962), of all resources available to an organization, human resources are perhaps the most important. Additionally, it is frequently the most unique organizational resource. Human capital is recognized as key to organizational success (Hitt et al. 2001a, 2001c). More specifically, human capital "... blends traditional aspects of personnel management (e.g., employee skills, knowledge, abilities) with economic principles of capital accumulation, investment, deployment and value creation that underlie much of strategic management" (Snell et al. 2001: 635). By investing in the human capital of management and employees, the benefit for the organization will be desirable outcomes that create value, generate wealth, and are unique and difficult to imitate.

## ***2.5 Employee Retention***

The role of employee retention is of critical importance for entrepreneurial organizations. Human capital is a fundamental asset to organizations with the relative costs of staff turnover including recruiting costs, training costs, loss of tacit knowledge, and lost productivity being a major challenge and barrier to organizational success. The dominant paradigm in staff turnover research has its roots in Mobley's (1977) model of staff turnover, which "posits that job and working conditions affect job

satisfaction which in turn leads to thoughts of quitting, to evaluation of the utility of searching behavior, job search, evaluation of alternatives, comparison of alternatives vs. the present job, intention to quit or stay, and finally to turnover or retention behavior” (Staw 1984: 642). It is critical that organizations have effective recruitment and selection processes in place in order to attract and retain the right caliber of staff that will emerge within the organizational culture. Employee retention is one of the biggest problems facing entrepreneurial organizations (Kemelgor and Meek 2008). Therefore, when the organizational culture is focused on entrepreneurship, they create a culture of cutting-edge exploration and exploitation that should aim to motivate employees to stay with their organization, thus creating competitive advantages in these organizations through achieving higher employee retention than competitors.

The retention of skilled workers can contribute to the long-term competitive advantage of entrepreneurial organizations (Kemelgor and Meek 2008). Organizations committed to an entrepreneurial strategy can achieve higher employee retention in comparison to organizations that adopt a more conservative strategic approach (Haar and White 2013). Organizations that want to increase employee retention need to develop a strong entrepreneurial strategy that drives and motivates management and employees to feel part of the organization.

## ***2.6 Effect of Strategic Entrepreneurship on Human Capital and Employee Retention***

There is an increased interest in human capital within the entrepreneurship literature over the last three decades. Human capital is the source of strategic entrepreneurial behavior (Ireland et al. 2003). Human capital is of paramount importance to the field of entrepreneurship. Ireland et al. (2003) propose that effective strategic entrepreneurship helps individuals overcome fears associated with disruptive innovations and new business models. Therefore, the process of strategic entrepreneurship undertaken by an organization affects how human capital engages with strategic entrepreneurship and how effective the organization is at maximizing the retention of high-caliber employees. Thus, effective entrepreneurial leadership (Covin and Slevin 2002) is a key element in managing strategic entrepreneurship effectively across levels of the organization. Through effective strategic entrepreneurship, human capital:

1. Is vital to the discovery and creation of entrepreneurial opportunities (Alvarez and Barney 2007; Marvel 2013)
2. Facilitates the exploitation of opportunities by acquiring financial resources and launching ventures (Bruns et al. 2008; Dimov 2010)
3. Supports the accumulation of new knowledge and the creation of advantages for new firms (Bradley et al. 2012; Corbett et al. 2007)

According to Hitt et al. (2001a), human capital has both a direct and indirect (through interactions with strategy) effects on organizational performance. Furthermore, their results show that the initial cost of human capital exceeds the value of the benefits it produces (Hitt et al. 2001a). However, as human capital increases (knowledge grows), the value it creates exceeds the costs (Ireland et al. 2003). Therefore, organizations need to strategically manage their human capital to facilitate the simultaneous and integration of opportunity and advantage-seeking behaviors to create value and generate wealth.

A clear vision focusing on the importance of strategic entrepreneurship as well as a commitment to develop human capital facilitates individuals' efforts to develop entrepreneurial capabilities such as agility, creativity, and skills to manage resources strategically (Alvarez and Barney 2002). The challenge facing organizations today is recognizing the creative competencies of its human capital and allowing those individuals to have the power to utilize their potential. Therefore, appropriately designing job roles to effectively manage change and employee retention is therefore important for strategic entrepreneurship. Furthermore, by supporting a culture of change, strategic entrepreneurship can decrease fear, stress, and ambiguity associated with risk-taking, innovative, and proactive activities (Upson et al. 2007). This requires designing more customized strategic entrepreneurship systems that better maximize wealth creation for organizations (Ireland et al. 2003). To engender strategic entrepreneurship, the organization must leverage human capital to explore and exploit opportunities. Therefore, in addition to nurturing the human capital for the greater good of the organization, previous experiences of success may enrich an individual's human capital, as they affirm what operational knowledge, emotional intelligence, and heuristics are appropriate to navigate new entrepreneurial endeavors (Wolfe and Shepherd 2015). To better facilitate this, leaders must clearly communicate the entrepreneurial strategy and encourage, motivate, and support all employees to be entrepreneurial and to implement the strategy and accomplish the organization's goals toward value creation and generation of wealth.

## ***2.7 Impact of Human Capital and Employee Retention on Strategic Entrepreneurship and Its Outcomes***

The uniqueness of human capital stems from the fact that people cannot be separated from their knowledge, skills, health, or values in the way they can be separated from their financial and physical assets (Becker 2008). Human capital is distinctive to the organization and increases the organizations' capabilities. Organizational knowledge predominately resides in its human capital. Scholars have consistently found that owners and managers with greater human capital are more likely to discover opportunities and succeed (e.g., Marvel and Lumpkin 2007; Marvel et al. 2014; Rauch et al. 2005; Unger et al. 2011). Human capital of managers and employees is linked with superior competitive advantages (Crook et al. 2011; Radaelli et al.

2018). Furthermore, individual competencies, together with their personal drive, motivation, and passion to achieve, are fundamental for an organization to explore and exploit opportunities and achieve a competitive advantage as a source of value, wealth, and long-term success.

Human capital (intangible resources) is necessary for organizations to engage in strategic entrepreneurship for achieving and sustaining a competitive advantage (Ireland et al. 2003). Furthermore, intangible resources are more likely to be associated with a strong entrepreneurial capability because they are socially complex and more difficult for rivals to understand and imitate (Ireland et al. 2009). Tacit knowledge is particularly important in identifying entrepreneurial opportunities (McGrath and MacMillan 2000) and achieving competitive advantage (Coff 2002). Innovation is increased by the quality of the human capital and enhanced labor productivity (van Ark and Piatkowski 2004). According to Katz et al. (2000: 7), “it is the human resources that paradoxically spell success or failure for all firms, and especially entrepreneurial ones.” Furthermore, Unger et al. (2011) completed a comprehensive meta-analysis study based on 70 studies with an overall sample size of 24,733 that integrated over 30 years of human capital research in entrepreneurship. Their study concluded “there is an overall positive relationship between human capital and entrepreneurial success” (Unger et al. 2011: 352). Hence, entrepreneurial organizations create value through their selection, development, and use of human capital (Lepak and Snell 1999) and the retention of high-caliber employees to explore and exploit entrepreneurial opportunities.

Human capital and employee retention is critical for the implementation of an organization’s entrepreneurial strategy. For people to work toward the organization’s strategy, they must clearly know what that strategy is and how essential entrepreneurship is to the realization of the organization’s objectives. To reach its full potential, however, human capital must be effectively managed (Lesser and Prusak 2001). Leaders need to identify any gaps in human capital that need to be filled to facilitate exploration and exploitation of current competitive advantages. Additionally, the capabilities of human capital should be continuously enhanced to develop and sustain competitiveness, create value, and generate wealth.

### 3 Conclusion

Strategic entrepreneurship is the integration of two interfaces: strategic management and entrepreneurship. For strategic entrepreneurship to be successful, its effect on human capital and employee retention as well as the impact of human capital and employee retention on strategic entrepreneurship which in turn affects the outcomes need to be clearly understood. The implications of strategic entrepreneurship are important for both theory and practice to recognize how organizations that effectively manage and retain human capital to explore and exploit opportunities establish and sustain competitive advantage and create value and generate wealth. The more challenging, complex, dynamic, and competitive the environment, the more

important strategic entrepreneurship is for achieving and sustaining competitiveness and generating wealth. This cannot be achieved without human capital and the retention of the right caliber of management and employees. Organizations with an entrepreneurial strategy that drives and motivates human capital to identify potentially valuable opportunities and enables them to exploit them to develop a competitive advantage will create value and generate wealth. Thus, human capital significantly impacts the ability of an organization to effectively exploit today's competitive advantages while successfully exploring tomorrow's opportunities for sustained competitive advantages. Human capital and employee retention is fundamental in driving this process; therefore, leaders need to continuously leverage human capital to create value and generate wealth for the organization.

## References

- Alvarez, S. A., & Barney, J. B. (2002). Resource-based theory and the entrepreneurial firm. In M. A. Hitt, R. D. Ireland, S. M. Camp, & D. L. Sexton (Eds.), *Strategic entrepreneurship: Creating a new mindset* (pp. 89–105). Oxford: Blackwell Publishers.
- Alvarez, S. A., & Barney, J. B. (2007). Discovery and creation: Alternative theories of entrepreneurial action. *Strategic Entrepreneurship Journal*, 1(1), 11–26.
- Becker, G. S. (1964). *Human capital: A theoretical and empirical analysis, with special reference to education*. Chicago, IL: University of Chicago Press.
- Becker, G.S. (2008). 'Human capital'. *The concise encyclopedia of economics. Library of Economics and Liberty*. <http://www.econlib.org/library/Enc/HumanCapital.html>.
- Bradley, S. W., McMullen, J. S., Artz, K., & Simiyu, E. M. (2012). Capital is not enough: Innovation in developing economies. *Journal of Management Studies*, 49(4), 684–717.
- Bruns, V., Holland, D. V., Shepherd, D. A., & Wiklund, J. (2008). The role of human capital in loan officers' decision policies. *Entrepreneurship Theory and Practice*, 32(3), 485–506.
- Burgelman, R. A. (1983). Corporate entrepreneurship and strategic management: Insights from a process study. *Management Science*, 29(12), 1349–1364.
- Burgelman, R. A., & Hitt, M. A. (2007). Entrepreneurial actions, innovation, and appropriability. *Strategic Entrepreneurship Journal*, 1(3/4), 349–352.
- Chandler, A. D. (1962). *Strategy and structure: Chapters in the history of the American industrial enterprise*. Washington, DC: Beard Books.
- Chen, M.J., Fairchild, G.B., Freeman, R.E., Harris, J.D., & Venkataraman, S. (2010). *What is strategic management?* Darden business publishing, UVA-S-0166.
- Choi, Y. R., Lévesque, M., & Shepherd, D. A. (2008). When should entrepreneurs expedite or delay opportunity exploitation? *Journal of Business Venturing*, 23(3), 333–355.
- Coff, R. W. (2002). Human capital, shared expertise, and the likelihood of impasse in corporate acquisitions. *Journal of Management*, 28(1), 107–128.
- Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94, S95–S120.
- Corbett, A. C., Neck, H. M., & DeTienne, D. R. (2007). How corporate entrepreneurs learn from fledgling innovation initiatives: Cognition and the development of a termination script. *Entrepreneurship Theory and Practice*, 31(6), 829–852.
- Covin, J. G., & Kuratko, D. F. (2010). The concept of corporate entrepreneurship. In V. K. Narayanan & G. C. O'Connor (Eds.), *The Blackwell encyclopedia of technology and innovation management* (pp. 207–213). West Sussex, UK: Wiley.

- Covin, J. G., & Miles, M. P. (2007). Strategic use of corporate venturing. *Entrepreneurship Theory and Practice*, 31(2), 183–207.
- Covin, J. G., & Slevin, D. P. (2002). The entrepreneurial imperatives of strategic leadership. In M. A. Hitt, R. D. Ireland, S. M. Camp, & D. L. Sexton (Eds.), *Strategic entrepreneurship: Creating a new integrated mindset* (pp. 309–327). Malden, MA: Blackwell Publishing.
- Crook, T. R., Todd, S. Y., Combs, J. G., Woehr, D. J., & Ketchen, D. J., Jr. (2011). Does human capital matter? A meta-analysis of the relationship between human capital and firm performance. *Journal of Applied Psychology*, 96(3), 443–456.
- Dess, G. G., & Lumpkin, G. T. (2001). Emerging issues in strategy process research. In M. A. Hitt, R. E. Freeman, & J. S. Harrison (Eds.), *Handbook of strategic management* (pp. 3–34). Oxford: Blackwell Publishers.
- Dimov, D. (2007). Beyond the single person, single insight attribution in understanding entrepreneurial opportunities. *Entrepreneurship Theory and Practice*, 31, 713–731.
- Dimov, D. (2010). Nascent entrepreneurs and venture emergence: Opportunity confidence, human capital, and early planning. *Journal of Management Studies*, 47(6), 1123–1153.
- Eckhardt, J. T., & Shane, S. A. (2003). Opportunities and entrepreneurship. *Journal of Management*, 29, 333–349.
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*, 21, 1105–1121.
- Haar, J. M., & White, B. J. (2013). Corporate entrepreneurship and information technology towards employee retention: A study of New Zealand firms. *Human Resource Management Journal*, 23(1), 109–125.
- Hamel, G. (2000). *Leading the revolution*. Boston, MA: Harvard Business School Press.
- Hisrich, R.D. and Kearney, C. (2013). *Managing innovation and entrepreneurship: A global perspective*. Thousand oaks, CA: SAGE publications Inc. © 2014.
- Hitt, M. A., Bierman, L., Shimizu, K., & Kochhar, R. (2001a). Direct and moderating effects of human capital on strategy and performance in professional service firms: A resource-based perspective. *Academy of Management Journal*, 44, 13–28.
- Hitt, M. A., & Ireland, R. D. (2000). The intersection of entrepreneurship and strategic management research. In D. L. Sexton & H. A. Landstrom (Eds.), *Handbook of entrepreneurship* (pp. 45–63). Oxford: Blackwell Publishers.
- Hitt, M. A., & Ireland, R. D. (2005). Strategic entrepreneurship. In M. A. Hitt & R. D. Ireland (Eds.), *The Blackwell encyclopedia of management: Entrepreneurship* (pp. 228–231). Oxford, UK: Blackwell Publishers.
- Hitt, M. A., Ireland, D. R., Camp, S. M., & Sexton, D. L. (2001b). Strategic entrepreneurship: Entrepreneurial strategies for wealth creation. *Strategic Management Journal*, 22(Special Issue), 479–491.
- Hitt, M. A., Ireland, R. D., & Harrison, J. S. (2001c). Mergers and acquisitions. In M. A. Hitt, R. E. Freeman, & J. S. Harrison (Eds.), *Handbook of strategic management* (pp. 384–408). Oxford: Blackwell Publishers.
- Hitt, M. A., Ireland, R. D., & Hoskisson, R. E. (2011). *Strategic management: Competitiveness and globalization* (9th ed.). Mason, OH: Thomson South-Western.
- Inkpen, A., & Choudhury, N. (1995). The seeking of strategy where it is not: Towards a theory of strategy absence. *Strategic Management Journal*, 16(4), 313–324.
- Ireland, D. R. (2007). Strategy vs entrepreneurship. *Strategic Entrepreneurship Journal*, 1, 7–10.
- Ireland, D. R., Covin, J. G., & Kuratko, D. F. (2009). Conceptualizing corporate entrepreneurship strategy. *Entrepreneurship Theory and Practice*, 33(1), 19–46.
- Ireland, R. D., Hitt, M. A., Camp, S. M., & Sexton, D. L. (2001). Integrating entrepreneurship and strategic management action to create firm wealth. *Academy of Management Executive*, 15(1), 49–63.
- Ireland, R. D., Hitt, M. A., & Sirmon, D. G. (2003). Strategic entrepreneurship: The construct and its dimensions. *Journal of Management*, 29(6), 963–989.

- Ireland, R. D., & Webb, J. W. (2009). Crossing the great divide of strategic entrepreneurship: Transitioning between exploration and exploitation. *Business Horizons*, 52(5), 469–479.
- Karra, N., Phillips, N., & Tracey, P. (2008). Building the born global firm—Developing entrepreneurial capabilities for international new venture success. *Long Range Planning*, 41, 440–458.
- Katz, J. A., Aldrich, H. E., Welbourne, T. M., & Williams, P. M. (2000). Guest editor's comments—Special issue on human resource management and the SME: Toward a new synthesis. *Entrepreneurship Theory and Practice*, 25(1), 7–10.
- Kearney, C., & Morris, M. H. (2015). Strategic renewal as a mediator of environmental effects on public sector performance. *Small Business Economics*, 45(2), 425–445.
- Kemelgor, B. W., & Meek, W. R. (2008). Employee retention in growth oriented entrepreneurial firm: An exploratory study. *Journal of Small Business Strategy*, 19(1), 81–95.
- Ketchen, D. J., Ireland, R. D., & Snow, C. C. (2007). Strategic entrepreneurship, collaborative innovation, and wealth creation. *Strategic Entrepreneurship Journal*, 1(3–4), 371–385.
- Knight, F. H. (1921). *Risk, uncertainty, and profit*. Boston: Houghton Mifflin.
- Kuratko, D. F. (2009). *Entrepreneurship: Theory, process, practice* (8th ed.). Mason, OH: Southwestern/Cengage Publishers.
- Kuratko, D. F., & Audretsch, D. B. (2009). Strategic entrepreneurship: Exploring different perspectives of an emerging concept. *Entrepreneurship Theory and Practice*, 33, 1–17.
- Kuratko, D. F., & Audretsch, D. B. (2013). Clarifying the domains of corporate entrepreneurship. *International Entrepreneurship and Management Journal*, 9, 323–335.
- Kuratko, D. F., Montagno, R. V., & Hornsby, J. S. (1990). Developing an intrapreneurial assessment instrument for an effective corporate entrepreneurial environment. *Strategic Management Journal*, 11(5), 49–58.
- Lepak, D. P., & Snell, S. A. (1999). The human resource architecture: Toward a theory of human capital allocation and development. *Academy of Management Review*, 24, 31–48.
- Lesser, E., & Prusak, L. (2001). Preserving knowledge in an uncertain world. *MIT Sloan Management Review*, 43(1), 101–102.
- Marvel, M. R. (2013). Human capital and search-based discovery: A study of high-tech entrepreneurship. *Entrepreneurship Theory and Practice*, 37(2), 403–419.
- Marvel, M. R., Davis, J. L., & Sproul, C. R. (2014). Human capital and entrepreneurship research: A critical review and future directions. *Entrepreneurship Theory and Practice*, 40(3), 599–626.
- Marvel, M. R., & Lumpkin, G. T. (2007). Technology entrepreneurs' human capital and its effects on innovation radicalness. *Entrepreneurship Theory and Practice*, 31(6), 807–828.
- McGrath, R. G., & MacMillan, I. (2000). *The entrepreneurial mindset*. Boston, MA: Harvard Business School Press.
- Meyer, G. D., Neck, H. M., & Meeks, M. D. (2002). The entrepreneurship-strategic management interface. In M. A. Hitt, R. D. Ireland, S. M. Camp, et al. (Eds.), *Strategic entrepreneurship: Creating a new mindset* (pp. 19–44). Oxford: Blackwell.
- Miles, M. P. (2005). Competitive advantage. In M. A. Hitt & R. D. Ireland (Eds.), *The Blackwell encyclopedia of management: Entrepreneurship* (pp. 36–37). Oxford, UK: Blackwell Publishers.
- Mobley, W. H. (1977). Intermediate linkages in the relationship between job satisfaction and employee turnover. *Journal of Applied Psychology*, 62(2), 237–240.
- Morris, M. H., Kuratko, D. F., & Covin, J. G. (2011). *Corporate entrepreneurship and innovation* (3rd ed.). Mason, OH: Thomson/South-Western.
- Porter, M. E. (1980). *Competitive strategy*. New York: Free Press.
- Radaelli, G., Dell Era, C., Frattini, F., & Petruzzelli, A. M. (2018). Entrepreneurship and human Capital in Professional Sport: A longitudinal analysis of the Italian soccer league. *Entrepreneurship Theory and Practice*, 42(1), 70–93.
- Rauch, A., Frese, M., & Utsch, A. (2005). Effects of human capital and long-term human resources development and utilization on employment growth of small-scale businesses: A causal analysis. *Entrepreneurship Theory and Practice*, 29(6), 681–698.

- Schendel, D., & Hitt, M. A. (2007). Comments from the editors: Introduction to volume 1. *Strategic Entrepreneurship Journal*, 1(1–2), 1–6.
- Schultz, T. W. (1960). The formation of human capital by education. *Journal of Political Economy*, 68, 571–583.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25, 217–226.
- Snell, S. A., Shadur, M. A., & Wright, P. M. (2001). Human resources strategy: The era of our ways. In M. A. Hitt, R. E. Freeman, & J. S. Harrison (Eds.), *Handbook of strategic management* (pp. 627–649). Oxford: Blackwell Publishers.
- Staw, B. M. (1984). Organizational behavior: A review and reformulation of the field's outcome variables. *Annual Review of Psychology*, 35, 627–666.
- Stokvik, H., Adriaenssen, D. J., & Johannessen, J. A. (2016). Strategic entrepreneurship and intrapreneurial intensity. *Problems and Perspectives in Management*, 14(2), 348–359.
- Unger, J. M., Rauch, A., Frese, M., & Rosenbusch, N. (2011). Human capital and entrepreneurial success: A meta-analytical review. *Journal of Business Venturing*, 26(3), 341–358.
- Upton, J. W., Ketchen, D. J., & Ireland, R. D. (2007). Managing employee stress: A key to the effectiveness of strategic supply chain management. *Organizational Dynamics*, 36, 78–92.
- van Ark, B., & Piatkowski, M. (2004). Productivity, innovation and ICT in old and new Europe. *International Economics and Economic Policy*, 1(2/3), 215–246.
- Venkataraman, S., & Sarasvathy, S. D. (2001). Strategy and entrepreneurship: Outlines of an untold story. In M. A. Hitt, E. Freeman, & J. S. Harrison (Eds.), *Handbook of strategic management*. Oxford: Blackwell.
- Volberda, H., Baden-Fuller, C., & van den Bosch, F. (2001). Mastering strategic renewal. *Long Range Planning*, 34(2), 159–178.
- Wheelen, T.L., Hunger, J.D., Hoffman, A. N., & Bamford, C.E. (2014). *Strategic management and business policy: Globalization, innovation, and sustainability*. Prentice Hall.
- Wolfe, M. T., & Shepherd, D. A. (2015). “Bouncing Back” from a loss: Entrepreneurial orientation, emotions, and failure narratives. *Entrepreneurship Theory and Practice*, 39(3), 675–700.



# Linkages Between Cognitive and Behavioral Competences to Assess the Organizational Dominant Logic

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**Abstract** Throughout the years, the concept of dominant logic has gained interest in management due to its recognized potential for strategic analysis in organizations. However, a literature review reveals the need yet to strengthen an operationalization approach to assess the dominant logic of organizations. Thus, the first objective of this chapter is to advance our understanding of this concept by exploring the cognitive and behavioral elements addressed in the literature. As a result, key elements have been identified to assess the dominant logic of organizations. The second objective of this paper is to estimate the relationships between the firms' performances as a function of the cognitive and behavioral competences of dominant logic, pointing out the importance of showing linkages between cognition, behavior, and organizational outcomes. Multiple linear regression (MLR) analyses were employed based on a sample of 281 high-performing firms from Mexico. In our view, this study contributes to the relevance of human capital and how it translates into an organizational dominant logic with implications to organizational outcomes.

**Keywords** Dominant logic · Opportunity identification · Organizational learning · Routines · Performance · Strategic orientation

## 1 Introduction

The concept of *dominant logic*, initially introduced by Prahalad and Bettis (1986), referred to “a mindset or a world view or conceptualization of the business and the administrative tools to accomplish goals and to make decisions in that business”

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(p. 490). Due to its roots in cognitive theory, dominant logic has represented a challenge in its operationalization (Prahalad and Bettis 1986; Grant 1988; Lampel and Shamsie 2000). While reviewing the literature, it showed a lack of clarity about which elements this concept should comprise (Cote et al. 1999; von Krogh and Roos 1996). Despite this, recent attempts have been made recognizing its potential to turn the dominant logic perspective into an important instrument of strategic analysis (Su and Wang 2018). More importantly, it has been emphasized that future studies should continue to refine the operationalization of dominant logic and to report the veracity of the elements tested and their relationships (Cote et al. 1999; Kor and Mesko 2013; Lampel and Shamsie 2000; Obloj et al. 2013, 2010; Obloj and Pratt 2005; von Krogh and Grand 2000).

The literature review revealed that there is a shortage of empirical quantitative studies, addressing both the cognitive and behavioral elements enclosed in its definition. Therefore, the first objective of this study is to expand our understanding of this concept by exploring the cognitive and behavioral elements of dominant logic identified in previous literature. As a result, we have identified key elements to advance the study of dominant logic. In addition, the second objective is to estimate the relationships between the firms' performances as a function of the cognitive and behavioral elements of dominant logic previously identified, pointing out the importance to "show linkages between cognition, behavior, and organizational outcomes" (Meindl et al. 1994; Mahoney 1995). Multiple linear regression (MLR) analyses were employed using a sample of 281 high-performing firms in Mexico. Our intent with this exploratory and empirical chapter is to contribute to the literature by identifying key competences to depict the organizational dominant logic of high-performing firms by identifying the key competences developed, thus advancing the study and operationalization of this construct.

This chapter is organized into four sections. Firstly, we reviewed the different definitions of dominant logic to discuss its evolution and identify key elements. Secondly, we analyzed and extracted cognitive and behavioral elements addressed in both conceptual and empirical studies. Thirdly, we conducted an empirical study in order to assess the relationship between those key elements of dominant logic to performance. Finally, we discussed our findings to conclude the importance of a suitable operationalization of this construct.

## 2 Dominant Logic

Prahalad and Bettis (1986) introduced the concept of dominant logic and defined it as "a mindset or a world view or conceptualization of the business and the administrative tools to accomplish goals and to make decisions in that business" (p. 491). Thus, as broadly put by the authors, the dominant logic can be considered as both a knowledge structure and a set of elicited management processes. This definition shows cognitive and behavioral elements, which remained present in subsequent

conceptualizations of dominant logic and as has been further developed throughout the literature.

Dominant logic can be viewed as a fundamental aspect of organizational intelligence and administrative processes composed of cognitive and behavioral elements. Cognitive elements encompass mainly data collection and interpretation from the environment, information-filtering processes, and knowledge creation (relating new information to previous information), resulting in organizational learning. All these cognitive activities are conducted by the dominant coalition within the organization, which ultimately influences its perceptions of the market environment and its strategic choices (Ward and Feldman 2008).

From the behavioral theory of the firm (Cyert and March 2006), the firm's dominant coalition is a collection of individuals responsible for the firm's decision-making and setting the firm's strategic priorities. Based on Gentry et al. (2016), the application of this theory allows for a more general perspective of how coalitions, specifically the dominant coalition, within this organizational context can influence the firm's strategic decisions. Ginsberg (1990) argued that it is critical to understand the role of top management belief systems and the process of organizational learning in shaping the strategy of an organization. The socio-cognitive model he proposed reflected the learning capacities of the dominant coalition associated with the abilities to collect and interpret information. Thus, these socio-cognitive capacities influence both cognitive and behavioral learning (p. 521).

Also, this dual view on cognition and behavior has been addressed by Kor and Mesko (2013). They defined dominant logic as "a system of expectations, beliefs, and priorities that are embedded in the firm's routines, procedures, and resource commitments" (p. 236). Thus, the authors emphasized that dominant logic influences the firm's configuration by serving as an information filter and by creating a competency filter, through an infrastructure featuring particular resource combinations and capabilities. A firm's resource and capability endowment influence the search efforts for growth, diversification, and strategic experimentation.

Authors have addressed both the necessity and difficulty in operationalizing this concept of dominant logic due to its cognitive nature (von Krogh and Grand 2000) and inherent methodological challenges (Lampel and Shamsie 2000). Nevertheless, others have made attempts and acknowledged its potential to turn it into a valuable instrument of strategic analysis (Obloj et al. 2010; Kor and Mesko 2013; Su and Wang 2018).

There were some initial attempts to operationalize dominant logic, such as Lane and Lubatkin (1998), who considered the formalization of management practices and the extent to which decisions are centralized. Whereas Cote et al. (1999) operationalized dominant logic as a combination of two factors, the administrative heritage is understood as cultural values and practices, and circumstantial factors, such as background and experience of top management. The authors identified cultural values and historical practices that have been successful in the core business and in which dominant logic is rooted. In their analysis of a firm's core activity let the authors recognize three features of the firm's dominant logic: firstly, the authors discussed the structures of organizations, differentiating between those that put a

greater emphasis on individual autonomy versus more centralized practices; secondly, firms with a focus on ad hoc collaboration (group orientation) facilitating fluid structures; and, thirdly, short-term time frame, flexibility, and opportunism arguing that the time horizon for evaluating performance is rather short.

Other authors, such as Lampel and Shamsie (2000), discussed how dominant logic as a cognitive framework develops a unified set of beliefs that reflect at every level. As a result, dominant logic constrains how managers see business problems. Furthermore, von Krogh and Grand (2000) defined a multidimensional dominant logic and proposed an operationalization consisting of two domains (internal/external) and five categories (people, culture, product and brand/competitor, customer and consumer, and technology) to explore the link between dominant logic and performance in dynamic markets.

Garg et al. (2003) used both concepts of dominant logic and sector salience to develop predictions about which internal capabilities and which sectors of the external environment should receive relatively more or less CEO scanning emphasis in competitive environments that are overall more stable or more dynamic. Although Obloj et al. (2010) argued that dominant logic is a critical resource that serves as a means for organizations to recognize and manage their resources, these authors operationalized two dimensions, dominant logic as an information filter (external orientation/opportunity seeking and proactiveness) and dominant logic as learning and routines (organizational learning and codification of routines) into the determinants of firms' performance.

From the literature review, it can be concluded that studies are mostly congruent with Prahalad and Bettis' (1986) conceptualization of dominant logic and over time the dominant coalition evolves to be an organizational-level phenomenon. Besides, the conceptualization of dominant logic should consider both the analyses of cognitive and behavioral elements, following a data-driven approach to information processing theory, which recognizes the importance of environmental change.

### **3 Key Elements of Dominant Logic**

The dominant logic of organizations is difficult to change since companies tend to keep doing what they know, relying on abilities that have become core rigidities or routines (Prahalad 2004). For this reason, we propose the study of dominant logic that includes the following cognitive and behavioral competences identified from the literature review analysis and which can be assessed at a certain point in time.

#### **3.1 Cognitive Elements**

In regard to the cognitive element, Bettis and Prahalad (1995) viewed dominant logic as an important emergent property of complex organizations seeking to adapt to their

environment. The cognitive element refers to the filter of information (distinguished in their model as a funnel). Dominant logic limits the ability of the organization to learn, acting as a filter of information. Moreover, Bettis (2000) extended the cognitive influence of dominant logic as a shared cognitive map among the dominant coalition. Furthermore, Prahalad (2004) made an analogy to dominant logic as the lens through which managers see all emerging opportunities.

For these reasons, we believe the opportunity identification and organizational learning represent key cognitive competences to assess the dominant logic or organizations.

### 3.1.1 Opportunity Identification

As stated before, dominant logic is a cognitive structure, a mindset that impacts the processes by which managers attend to and process information (Lampel and Shamsie 2000), and then the study of dominant logic can provide additional light regarding how managers recognize the options and opportunities available to the firm. Brannback and Wiklund (2001) referred to how manager perceives what happens outside the company in the business environment, whereas Kor and Mesko (2013) referred to the cognitive models of founders and managers interacting with a business and firm's environment and the application of mental models in a particular business context. Therefore, we propose the following:

#### Hypothesis 1

Opportunity identification as a key cognitive element of the organization's dominant logic will positively influence the firm's performance.

### 3.1.2 Organizational Learning

All relevant data are filtered by the dominant logic, which in turn are considered an aspect of organizational intelligence and learning. Baum et al. (2000) proposed that learning can be transformed into organizational knowledge. This knowledge acquisition process can be viewed as an intangible resource, which could as well represent a competitive advantage for organizations. Other studies suggest that management learning is an essential prerequisite for active strategy development (Dodgson 1991; Berry 1996). Organizations are seen as learning by encoding inferences from history into routines that guide behavior (Levitt and March 1988). Therefore, we propose the following:

#### Hypothesis 2

Organizational learning as a key cognitive element of the organization's dominant logic will positively influence the firm's performance.

## 3.2 Behavioral Elements

Inferring the difficulty in operationalizing a cognitive concept, Grant (1988) suggested studying dominant logic as a set of specific corporate-level functions to make significant progress. Considering Prahalad and Bettis' (1986) definition of dominant logic as "the administrative tools to accomplish goals and make decisions" (p. 491), Grant argued that if those tools could be specified, such operationalization is then possible. Likewise, Prahalad (2004) denoted three aspects of the behavioral element of dominant logic: reflecting standard operating procedures, how managers are socialized, and shaping how members of the organization act. These elements can be inferred from Kor and Mesko (2013) when emphasizing that dominant logic is embedded in the firm's routines, procedures, and resource commitments. For these reasons, organizational routines and strategic cultural orientations represent key behavioral elements of dominant logic.

### 3.2.1 Organizational Routines

Organizations are usually characterized as routine-based, history-dependent systems that adapt incrementally to experience and target-oriented (Baum et al. 2000). Thus, routines imply a behavior that is learned, repetitious, or quasi-repetitious, founded in part in organizational learning and knowledge. Moreover, firms must build routines that facilitate the diffusion of local knowledge throughout the organization for use everywhere that it has value (Hitt et al. 2011).

A dominant logic can be seen as resulting from the reinforcement that results from doing the *right things* concerning a set of businesses. In other words, a particular mindset, preferred processes, administrative tools, and routines are developed and well accepted. As a result, routines are based on past experiences more than on expectations of the future. Both new and established organizations are based on existing routines developed in previous environments and implement actions to execute specific tasks (Autio et al. 2011). According to Levitt and March (1988), routines include forms, rules, procedures, conventions, strategies, and technologies around which organizations are constructed and through which frameworks and paradigms they operate. Therefore, we propose the following hypothesis:

#### Hypothesis 3

Organizational routines as a key behavioral element of the organization's dominant logic will positively influence the firm's performance.

### 3.2.2 Cultural Strategic Orientations

Culture is the deeply rooted set of values and beliefs that provide norms for behavior in the organization (Slater and Narver 1995). Thus, organizational culture is a

valuable strategic resource that firms can use to gain a competitive advantage. Based on the identification of cultural features of dominant logic depicted by Cote et al. (1999), we explore the association between these dimensions of organizational culture, group orientation, external orientation, decentralized orientation, and strategic cultural orientations, as behavioral determinants of dominant logic.

### 3.2.2.1 External Cultural Orientation

An external cultural orientation places emphasis on their external environment, markets, competitors, customers, suppliers, and trends that provide essential insights into opportunities. One key characteristic of dominant logic for more outside oriented firms in transition economies is whether they view their environment as an opportunity or as a threat (Obloj et al. 2010). Therefore, the following hypothesis is proposed:

#### **Hypothesis 4**

External cultural orientation as a key behavioral element of the organization's dominant logic will positively influence the firm's performance.

### 3.2.2.2 Group Cultural Orientation

Top management plays an essential role in establishing and strengthening a group cultural orientation within the organization, promoting an open atmosphere to share freely and discuss ideas, perspectives, and beliefs (Mintzberg 2009). A firm's dominant logic cultivation of a group cultural orientation will maintain open channels of communication to feed relevant information to the top management (Kor and Mesko 2013). The dominant logic is embedded in standard operating procedures, shaping not only how the members of the organization act but also how they think. The literature on groups underlines higher levels and refinement of common knowledge, language, and shared meaning within organizations, making it easier to incorporate unique insights and specialized knowledge bases (Grant 1996).

A group cultural orientation is a catalyst for organizational learning and be open to new possibilities (Kor and Mesko 2013). On the other hand, a cultural orientation of individualism facilitates the recognition of radical innovation by individuals but may discourage organizational group or team efforts and knowledge sharing. Therefore, we believe the benefits of a group cultural orientation outlast the individual ones regarding dominant logic and organizational performance. Accordingly, we formulate the following hypothesis:

### **Hypothesis 5**

Group cultural orientation as a key behavioral element of the organization's dominant logic will positively influence the firm's performance.

#### 3.2.2.3 Decentralized Cultural Orientation

One essential aspect of decentralization is to make decisions at the level where the proper expertise is available. Kuratko et al. (2001) found that decentralizing decision-making authority empowered employees to regulate their behavior and enabled rapid, creative responses to market opportunities as they surfaced. However, not all decision-making can be decentralized. Plans, strategies, and budgets must be reviewed, and managerial performance must be assessed (Prahalad and Bettis 1986). Also, Kuratko et al. (2001) reported that decentralization facilitated the forming of teams, expected to be the primary source of the process, product, and market innovations. Therefore, we hypothesize:

### **Hypothesis 6**

Decentralized cultural orientation as a key behavioral element of the organization's dominant logic will positively influence the firm's performance.

#### 3.2.2.4 Strategic Cultural Orientation

Based on Zahra (1996), financial controls support a short-term orientation, while strategic controls suggest a long-term orientation. In corporations where multidivisional structures prevail, companies emphasize financial reporting in measuring performance, by using formal budgets and information systems (Zahra 1995).

On the other hand, strategic controls encourage longer-term investments in projects that influence the firm's value, thus requiring an understanding of the tasks at hand, the risks involved, and the potential compromises. Strategic controls encourage spending on innovation and entrepreneurial activities based on external opportunity identification (Hitt et al. 1990). Based on the previous element identification, we extend the study of dominant logic and give further insights on each of the previously described elements and their effects on performance. Therefore, the following research hypotheses are formulated:

### **Hypothesis 7**

Financial cultural orientation as a key behavioral element of the organization's dominant logic will positively influence the firm's performance.

### **Hypothesis 8**

Strategic cultural orientation as a key behavioral element of the organization's dominant logic will positively influence the firm's performance.



## 4 Database, Variables, and Methodology

### 4.1 Database

Our empirical analysis has been conducted based on data from a survey carried out among high-performing firms in Mexico. Data were collected from CEOs within the targeted firms using questionnaire-based surveys. We decided to use CEOs as our key informants since they receive information from a wide range of departments and are therefore a valuable source for evaluating the different variables of the organization. CEOs also play a significant role in informing and molding the variables under study by determining the types of behavior that are expected and supported (Bolívar-Ramos et al. 2012). Although numerous actors may be involved in the management process, the CEO is ultimately responsible for plotting the organization's direction and plans, as well as for guiding the actions carried out to achieve them (Westphal and Fredrickson 2001). The same type of informant was chosen, since this means that the level of influence among the organizations is constant, increasing the validity of the variables' measurements.

This research is cross-sectional and used a single data source for strategic performance indicators, which could result in common method variance. To minimize this risk, respondents were guaranteed perfect anonymity, and no incentives were given for survey completion. Initially, we surveyed five different CEOs from local firms in the cities of Queretaro, Monterrey, and San Luis Potosi, which served as a pretest of the questionnaire to ensure correct wording, overall structure, and all the response options were given. Once the pretest was completed, we used the online Qualtrics platform to administer the delivery and follow-up of the surveys.

Three different sources to gather reliable information about firms were considered. The first one was an internal database of firms provided by the Entrepreneurship Institute *Eugenio Garza Lagüera* at the Tecnológico de Monterrey in Mexico (TEC). Such database contained a list of firms in Mexico, most of them with the CEOs' contact information. The second source was to contact the TEC's business incubators and technological parks from four different campuses in Mexico including Monterrey, Chihuahua, Queretaro, and San Luis Potosi. These institutions provided us as well with a list of companies with their corresponding contact information. Also, the third source was to contact currently enrolled graduate students at Queretaro Campus and postgraduate students at TEC's Virtual University, many of which are CEOs or occupy top-level positions in Mexican firms. The particular interest of TEC to develop quality research in Mexico and the close collaboration among colleagues and the researchers involved in this study were decisive in obtaining the information and conducting this investigation.

The survey consisted of sections pertaining to the dominant logic of the firm, encompassing cognitive and behavioral variables, and performance. The CEOs of the companies filled out the questionnaires individually; each survey took from 30 to 50 min to complete. A personalized invitation to respond to the online version of the questionnaire was then delivered to each of the contacts within the databases

mentioned above. We received replies from 431 firms, and after proceeding to the removal of incomplete questionnaires, 281 were considered valid.

## 4.2 Methodology

The theoretical model proposed here is tested by the estimation of a multiple linear regression model. Regression analysis allows us to estimate the relationship between the firms' performances as a function of the cognitive and behavioral competences related to dominant logic. The regression coefficients estimate the impact of the explanatory variables as competences on the relationship with the dependent variable.

### 4.2.1 Dependent Variable

Organizational performance (*Perform*) is our dependent variable. We used a subjective measure, which is a valid alternative when objective measures are not obtainable (Venkatraman and Ramanujam 1987), and they are used while studying emerging economies (Obloj et al. 2010). We used a five-point Likert-type scale asking the respondents to provide an assessment of their firm's position during the last 2 years versus their main competitors regarding the quality of products/services, market share increase, new market entry, and total profits.

### 4.2.2 Independent Variables

Following Obloj et al. (2010), five-point Likert scales were used to measure two cognitive elements of dominant logic: opportunity identification (*Opport*) and organizational learning (*Learning*). As of behavioral elements or core business features, we used codification of routines (*Routines*), and following Zahra et al. (2004), we used five-point Likert scales to measure five characteristics of organizational cultural orientation: external (*External*), decentralized (*Decentral*), group (*Group*), short-term (*Financial*), and long-term (*Strategic*) orientations.

To further assess the reliability of the indices, Cronbach's alpha and item-total correlation coefficients were computed (see Table 1). The results showed that while for *Perform* ( $\alpha = 0.842$ ), *Group* ( $\alpha = 0.819$ ), *Opport* ( $\alpha = 0.795$ ), *Routines* ( $\alpha = 0.775$ ), *Financial* ( $\alpha = 0.774$ ), *Proact* ( $\alpha = 0.771$ ), *Decentral* ( $\alpha = 0.749$ ), *Strategic* ( $\alpha = 0.722$ ), Cronbach's alpha values were above or approaching the recommended level. In the case of *External* ( $\alpha = 0.750$ ) *Learning* ( $\alpha = 0.617$ ), we preceded with the deletion of one item to improve the Cronbach's alpha. The

majority of the corrected item-total correlations were above 0.50, indicating the degree of variance with their respective constructs (Nunnally and Bernstein 1994).

### 4.2.3 Control Variables

We introduced into the analysis three control variables identified in prior literature that measure firm characteristics. Firstly, firms have been classified respectively considering their total number of employees. We used a dummy variable to classify small- and medium- (less than 50 employees) and large (more than 50 employees)-sized companies, coded with values 1 and 0, respectively. Secondly, a dummy variable was created to assess firms belonging to the industrial and commercial/services sector with a value of 1 and 0, respectively. Thirdly, a dummy variable was created to assess if a family or groups of families have a significant percentage of the property on the company, thus coding 1 if this was the case.

## 5 Results and Discussion

Table 1 summarizes the descriptive statistics for the variables used in the study and shows the matrix of correlations. Before the analysis, multicollinearity checks were conducted. The maximum variance inflation factor (VIF) value found was 1.947. This felt far short of 5, the cutoff considered as a limit (Neter et al. 1983; Hair et al. 1998). Besides, the condition index showed a maximum value of 29.15 for the independent variables, below the recommended threshold of 30 (Hair et al. 2010). Hence, multicollinearity was not an issue.

Two regression models were performed; the results are shown in Table 2. Model 1 included all the control variables in our sample, and model 2 included the variables pertaining to cognitive and behavioral elements of dominant logic.

In linear regression, our primary measure of model fit is  $R^2$ , which was an indicator of the percentage of variance in the dependent variable explained by the model. The results of the regression analyses are shown in Table 2. The three models and their corresponding  $R^2$  are significant, model 1 and 2 ( $p < 0.001$ ), respectively. As noted before, the strength of the models is assessed through  $R^2$ . There is an increase in the  $R^2$  values from the corresponding model 1 to 2. The  $R^2$  value shows a moderated predictive quality of model 2 with a value higher of 0.33 (Chin 1998).

Model 1 included all the control variables in our sample, and *Size* ( $\beta = -0.204$ ,  $p < 0.001$ ) showed significance to our dependent variable. Firms with more than 50 employees have higher performance levels than smaller firms. In model 2, which includes all variables in our study, we found a strong relationship among the variables related to the dominant logic with performance. Firstly, the variable associated with the cognitive elements highly significant to performance was *Learning* ( $\beta = 0.180$ ,  $p < 0.01$ ) providing support to hypothesis 2. Secondly, the variables related to the behavioral elements that resulted significantly were *Routines*

**Table 1** Pearson correlations ( $n = 281$ )

	Mean	SD	Perform	Routines	Learning	Opport	Decentral	Group	Strategic	External	Size	Family	Sector
<i>Perform</i>	3.80	0.611	1										
<i>Routines</i>	3.76	0.578	0.435 <sup>***</sup>	1									
<i>Learning</i>	3.75	0.642	0.456 <sup>***</sup>	0.486 <sup>***</sup>	1								
<i>Opport</i>	3.97	0.550	0.336 <sup>***</sup>	0.350 <sup>***</sup>	0.415 <sup>***</sup>	1							
<i>Decentral</i>	3.77	0.675	0.390 <sup>***</sup>	0.544 <sup>***</sup>	0.539 <sup>***</sup>	0.404 <sup>***</sup>	1						
<i>Group</i>	3.99	0.693	0.289 <sup>***</sup>	0.417 <sup>***</sup>	0.340 <sup>***</sup>	0.295 <sup>***</sup>	0.459 <sup>***</sup>	1					
<i>Strategic</i>	3.86	0.767	0.189 <sup>***</sup>	0.361 <sup>***</sup>	0.267 <sup>***</sup>	0.215 <sup>***</sup>	0.298 <sup>***</sup>	0.315 <sup>***</sup>	1				
<i>External</i>	3.95	0.615	0.464 <sup>***</sup>	0.497 <sup>***</sup>	0.497 <sup>***</sup>	0.395 <sup>***</sup>	0.500 <sup>***</sup>	0.408 <sup>***</sup>	0.262 <sup>***</sup>	1			
<i>Family</i>	0.53	0.500	0.100	-0.058	0.001	-0.087	-0.161 <sup>***</sup>	-0.035	0.094	-0.047	1		
<i>Size</i>	0.60	0.490	-0.212 <sup>***</sup>	-0.069	-0.025	-0.030	-0.016	0.071	-0.130 <sup>*</sup>	-0.016	-0.141 <sup>*</sup>	1	
<i>Sector</i>	0.28	0.449	0.034	0.024	-0.040	-0.010	-0.083	-0.046	0.068	0.023	0.055	-0.286 <sup>***</sup>	1

Notes: <sup>\*\*</sup> Correlation is significant at the 0.01 level (1-tailed); <sup>\*</sup> correlation is significant at the 0.05 level (1-tailed)

**Table 2** Multiple regression analyses

Elements	Model 1		Model 2	
	B <sup>a</sup>	SE <sup>b</sup>	B <sup>a</sup>	SE <sup>b</sup>
<i>Cognitive</i>				
<i>Opport</i>			0.087	0.063
<i>Learning</i>			0.180**	0.060
<i>Behavioral</i>				
<i>External</i>			0.201***	0.062
<i>Routines</i>			0.138*	0.070
<i>Financial</i>			0.097*	0.043
<i>Strategic</i>			-.082 <sup>†</sup>	0.046
<i>Group</i>			0.061	0.055
<i>Decentral</i>			0.056	0.061
<i>Control</i>				
<i>Size</i>	-0.261***	0.077	-0.203**	0.066
<i>Family</i>	0.083	0.072	0.152*	0.062
<i>Sector</i>	-0.040	0.083	-0.031	0.069
<i>Constant</i>	3.921***	0.081	0.995***	0.286
R <sup>2</sup>	0.050		0.374	
Adjusted R <sup>2</sup>	0.040		0.348	
F	4.893**		14.466***	

Notes: Dependent variable: performance (*Perform*)  
 Levels of significance: \*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$ ;  
<sup>†</sup>  $p < 0.1$   
<sup>a</sup>Parameter estimates  
<sup>b</sup>Standard errors

( $\beta = 0.138, p < 0.05$ ), in addition to three cultural orientation variables, *External* ( $\beta = 0.201, p < 0.001$ ), *Strategic* ( $\beta = -0.082, p < 0.1$ ), and *Financial* ( $\beta = 0.097, p < 0.05$ ). These results support hypotheses 3, 4, 7, and 8. These results can be interpreted as the high-performing firms in our sample that have developed a dominant logic with competences stressing a more financial orientation (short-term) versus a strategic (long-term) orientation while being attentive at external opportunities.

Moreover, regarding the control variables in this study, both *Size* ( $\beta = -0.203, p < 0.01$ ) and *Family* ( $\beta = 0.152, p < 0.05$ ) were significant in this model. This result calls for further studies to consider samples of companies of different sizes and to analyze them in greater detail as they might portray different cognitive and behavioral elements as competences of high-performing firms. Besides, the *SECTOR* not being significant calls for future research to expand the study and consider multigroup analyses with the use of second-generation statistical methods.

Finally, our results bring support to deepen the study of the familial character of the firms. This provides evidence to consider additional variables related to the characteristics of the dominant coalition or top management team, as well as founder or successors, enriching the finding, for example.

These results show statistically significant relationships of elements of dominant logic and performance, although they do not demonstrate causality. These results provide insights into the dominant logic key cognitive and behavioral elements concerning the characteristics of high-performance firms operating in an emerging economy.

## 6 Conclusions

For many authors, future research into the dominant logic concept implies the need to continue to refine its operationalization to identify more precisely relations between its significant cognitive and behavioral components. In our view, dominant logic represents a valuable construct to assess the relevance of human capital as the logic of the dominant coalition or the top management team and how it translates into an organizational dominant logic with implications to the strategic management and entrepreneurship literature and key implications for the firm's competitiveness and performance.

We suggest that the study of dominant logic must consider cognitive and behavioral elements to lead to the configuration of strategic and organizational competences that generate a competitive advantage. The literature review in this study allowed us to explore these key elements and incorporate the analysis of cognitive and behavioral elements, such as organizational orientation, as core business features and in which dominant logic is rooted.

Our findings provide empirical evidence that for high-performing firms in an emerging economy such as Mexico, behavioral elements of dominant logic such as external and financial orientation are linked to performance. Interestingly, strategic orientation is significant with a negative sign implying a detriment to performance. Besides, the variable of routines is highly significant. As far as the cognitive dimension of dominant logic viewed as a filter of information, learning is highly significant, a result that is in line with other studies (Obloj et al. 2010). Therefore, these elements represent the identification of competences for other firms to develop and imitate those with higher performance in a particular context.

Also, control variables such as the size and familial character of the firm are relevant to our study, which demand further exploration. These results could shed new insight regarding the operationalization of dominant logic by linking administrative processes as critical features of the firms' dominant logic and signaling those strategic and cultural dimensions that either promote or detriment performance.

Future studies are needed to assess in more depth the cognitive and behavioral competences here identified and study the relationship between the characteristics of the dominant coalition or top management and how this is translated into an organizational dominant logic over time. Also, studies should consider individual cases of organizations and significant changes in management throughout time.

Future studies should also consider the significance of the control variables in this study to deepen into the specific characteristics of the sample and control for firm size, TMTs and the family nature of the firm. Besides, other statistical methods of second generation, such as structural equation modeling (SEM), are highly recommended to overcome the limitations of first-generation techniques.

## References

- Autio, E., George, G., & Alexy, O. (2011). International entrepreneurship and capability development-qualitative evidence and future research directions. *Entrepreneurship Theory and Practice*, 35(1), 11–37.
- Baum, J. A. C., Li, S. X., & Usher, J. M. (2000). Making the next move: How experiential and vicarious learning shape the locations of chains' acquisitions. *Administrative Science Quarterly*, 45(4), 766.
- Berry, M. M. J. (1996). Technical entrepreneurship, strategic awareness and corporate transformation in small high-tech firms. *Technovation*, 16(9), 487–522.
- Bettis, R. A. (2000). The iron cage is emptying the dominant logic no longer dominates. In J. A. C. Baum & F. Dobbin (Eds.), *Advances in strategic management* (pp. 167–174). Limited: Emerald Group Publishing.
- Bettis, R. A., & Prahalad, C. K. (1995). The dominant logic: Retrospective and extension. *Strategic Management Journal*, 16(1), 5–14.
- Bolivar-Ramos, M., Garcia-Morales, V., & Garcia-Sanchez, E. (2012). Technological distinctive competencies and organizational learning: Effects on organizational innovation to improve firm performance. *Journal of Engineering and Technology Management*, 29(3), 331–357.
- Brannback, M., & Wiklund, P. (2001). A new dominant logic and its implications for knowledge management: A study of the Finnish food industry. *Knowledge and Process Management*, 8(4), 197–206.
- Chin, W. W. (1998). The partial least squares approach for structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods for business research* (pp. 295–336). Mahwah, NJ: Lawrence Erlbaum Associates, Inc, Publishers.
- Cote, L., Langlely, A., & Pasquero, J. (1999). Acquisition strategy and dominant logic in an engineering firm. *Journal of Management Studies*, 36(7), 919–952. <https://doi.org/10.1111/1467-6486.00164>.
- Cyert, R. M., & March, J. G. (2006). A behavioral theory of the firm. In J. B. Miner (Ed.), *Organizational behavior 2: Essential theories of process and structure* (p. 60). Armonk, NY: M.E. Sharpe.
- Dodgson, M. (1991). Managing corporate technology strategy. *International Journal of Technology Management*, (Special issue on the Role of Technology in Corporate Policy), 95–102.
- Garg, V. K., Walters, B. A., & Priem, R. L. (2003). Chief executive scanning emphases, environmental dynamism, and manufacturing firm performance. *Strategic Management Journal*, 24(8), 725–744.
- Gentry, R., Dibrell, C., & Kim, J. (2016). Long-term orientation in publicly traded family businesses: Evidence of a dominant logic. *Entrepreneurship: Theory and Practice*, 40(4), 733–757.
- Ginsberg, A. (1990). Connecting diversification to performance: A socio-cognitive approach. *Academy of Management Review*, 15(3), 514–535.
- Grant, R. M. (1988). On 'dominant logic,' relatedness and the link between diversity and performance. *Strategic Management Journal*, 9(6), 639–642.
- Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17, 109–122.

- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis with readings*. Upper Saddle River, NJ, USA: Prentice Hall.
- Hair, J. F., Black, B., Barry, B., & Anderson, R. (2010). *Multivariate data analysis* (7th ed.). Upper Saddle River, NJ: Prentice Hall.
- Hitt, M. A., Hoskisson, R. E., & Ireland, R. D. (1990). Mergers and acquisitions and managerial commitment to innovation in M-form firms. *Strategic Management Journal*, *11*, 29–47.
- Hitt, M. A., Ireland, R. D., & Hoskisson, R. E. (2011). *Strategic management competitiveness & globalization* (9th ed.). South-Western Cengage Learning.
- Kor, Y. Y., & Mesko, A. (2013). Dynamic managerial capabilities: Configuration and orchestration of top executives' capabilities and the firm's dominant logic. *Strategic Management Journal*, *34* (2), 233–244. <https://doi.org/10.1002/smj.2000>.
- Kuratko, D. F., Ireland, R. D., & Hornsby, J. S. (2001). Improving firm performance through entrepreneurial actions: Acordia's corporate entrepreneurship strategy. *The Academy of Management Executive*, *15*(4), 60–71.
- Lampel, J., & Shamsie, J. (2000). Probing the unobtrusive link: Dominant logic and the design of joint ventures at general electric. *Strategic Management Journal*, *21*(5), 593–602. [https://doi.org/10.1002/\(SICI\)1097-0266\(200005\)21:5<593::AID-SMJ100>3.0.CO;2-0](https://doi.org/10.1002/(SICI)1097-0266(200005)21:5<593::AID-SMJ100>3.0.CO;2-0).
- Lane, P. J., & Lubatkin, M. (1998). Relative absorptive capacity and interorganizational learning. *Strategic Management Journal*, *19*(5), 461–477. [https://doi.org/10.1002/\(SICI\)1097-0266\(199805\)19:5<461::AID-SMJ953>3.0.CO;2-L](https://doi.org/10.1002/(SICI)1097-0266(199805)19:5<461::AID-SMJ953>3.0.CO;2-L).
- Levitt, B., & March, J. G. (1988). Organizational learning. *Annual Review of Sociology*, *14*(1), 319–338.
- Mahoney, J. T. (1995). The management of resources and the resource of management. *Journal of Business Research*, *33*(2), 91–101.
- Meindl, J. R., Stubbart, C., & Porac, J. F. (1994). Cognition within and between organizations: Five key questions. *Organization Science*, *5*(3), 289–293.
- Mintzberg, H. (2009). Rebuilding companies as communities. *Harvard Business Review*, *87*(7/8), 140–143.
- Neter, J., Wasserman, W., & Kutner, M. (1983). *Applied linear regression models*. Homewood: Irwin.
- Nunnally, J., & Bernstein, I. (1994). *Psychometric theory*. New York: McGraw-Hill.
- Obloj, K., & Pratt, M. G. (2005). Happy kids and mature losers: Differentiating the dominant logics of successful and unsuccessful firms in emerging markets. In R. A. Bettis (Ed.), *Strategy in transition* (pp. 81–104). Hoboken, NJ: Blackwell Publishing Ltd.
- Obloj, T., Obloj, K., & Pratt, M. G. (2010). Dominant logic and entrepreneurial firms' performance in a transition economy. *Entrepreneurship Theory and Practice*, *34*(1), 151–170. <https://doi.org/10.1111/j.1540-6520.2009.00367.x>.
- Obloj, K., Weinstein, M., & Zhang, S. (2013). Self-limiting dominant logic: An exploratory study of Chinese entrepreneurial firms. *Journal of East-West Business*, *19*(4), 291–316. <https://doi.org/10.1080/10669868.2013.847888>.
- Prahalad, C. K. (2004). The blinders of dominant logic. *Long Range Planning*, *37*(2), 171–179.
- Prahalad, C. K., & Bettis, R. A. (1986). The dominant logic: A new linkage between diversity and performance. *Strategic Management Journal*, *7*(6), 485–501.
- Slater, S. F., & Narver, J. C. (1995). Market orientation and the learning organization. *Journal of Marketing*, *59*(3), 63–74.
- Su, Z., & Wang, D. (2018). Entrepreneurial orientation, control systems, and new venture performance: A dominant logic perspective. *Entrepreneurship Research Journal*, *8*(3), 1–17.
- Venkatraman, N., & Ramanujam, V. (1987). Measurement of business economic performance: An examination of method convergence. *Journal of Management*, *13*(1), 109–122. <https://doi.org/10.1177/014920638701300109>.
- von Krogh, G., & Grand, S. (2000). Justification in knowledge creation: Dominant logic in management discourses. In G. Von Krogh, I. Nonaka, & T. Toshihiro (Eds.), *Knowledge creation: A source of value* (pp. 13–35). New York: Macmillan Pres.



- von Krogh, G., & Roos, J. (1996). A tale of the unfinished. *Strategic Management Journal*, 17(9), 729–737. [https://doi.org/10.1002/\(SICI\)1097-0266\(199611\)17:9<729::AID-SMJ850>3.0.CO;2-1](https://doi.org/10.1002/(SICI)1097-0266(199611)17:9<729::AID-SMJ850>3.0.CO;2-1).
- Ward, A. J., & Feldman, D. C. (2008). Survival of the embedded: Expelling and embedding forces on members of the corporate elite. *Corporate Governance: An International Review*, 16(3), 239–251.
- Westphal, J. D., & Fredrickson, J. W. (2001). Who directs strategic change? Director experience, the selection of new CEOs, and change in corporate strategy. *Strategic Management Journal*, 22(12), 1113–1137.
- Zahra, S. A. (1995). Corporate entrepreneurship and financial performance: The case of management leveraged buyouts. *Journal of Business Venturing*, 10(3), 225–247.
- Zahra, S. A. (1996). Governance, ownership, and corporate entrepreneurship: The moderating impact of industry technological opportunities. *Academy of Management Journal*, 39(6), 1713–1735.
- Zahra, S. A., Hayton, J. C., & Salvato, C. (2004). Entrepreneurship in family vs. non-family firms: A resource-based analysis of the effect of organizational culture. *Entrepreneurship: Theory and Practice*, 28(4), 363–381.

# Toward the Creation of Intrapreneur-Friendly Organization

Abdullah Ramdhani, Prisia Fauzizah, Dini Turipanam Alamanda, and Grisna Anggadwita

**Abstract** A number of companies are now starting to build accelerators and incubators to enable them to communicate continuously with many of the industry's leading start-ups. The missions of these organizations will be achieved by improving their performance through knowledge sharing. One of the main sources of entrepreneurial competitive advantage is organizational capabilities, implemented with a resource-based strategy. Corporate conceptualization is one of the organizational capabilities that enables companies to overcome systematic internal constraints. New business initiatives will allow companies to rediscover themselves. This paper examines the impact of knowledge sharing and organizational capabilities on intrapreneurship. A quantitative method with a causal type was used in this study. The questionnaires were distributed to 209 workers in 27 Toyota authorized dealers in Indonesia, and then the obtained data was processed using structural equation modeling. The results revealed that knowledge sharing and organizational capabilities have a significant impact on intrapreneurship in official Toyota dealers. Another finding was that organizational factors have a dominant influence in increasing the value of intrapreneurship. This research implies that companies can increase intrapreneurship by making real policies and paying attention to the supporting elements.

**Keywords** Intrapreneurship · Knowledge sharing · Organizational capability

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## 1 Introduction

The increasing competition in the world today coincides with the rapid development of the international environment. It has ushered industrial society into information society and transformed the national economy into a global economy. As explained by Ahmadpur (2006), entrepreneurship plays a crucial role in the economy and development of a country, because it can increase efficiency and creates jobs and social welfare. Companies must create conditions in which all employees can have an entrepreneurial spirit, so they will have good capabilities to work either independently or in groups. According to Emami (2004), the implementation of intrapreneurship as an organizational effort can be achieved through create mental and entrepreneurial skills in the culture and activities of the organization. Entrepreneurship was formed to solve several problems such as increasingly fierce competition, distrust of traditional management methods in organizations, and lack of quality workforce and independent capabilities. As long as entrepreneurship operates in empty spaces and minds, innovative ideas will never emerge. Thus, the role of companies is needed to provoke, develop, and realize the employees' ideas. This is called knowledge sharing.

Transportation facilities play an important role in people's daily lives, including as a means of mobility. The automotive industry in Indonesia began to develop since the operation of the ATPM (the sole brand holder) in the early 1970s supported by the Minister of Industry Decree No. 295/1982 and No. 428/1987. ATPM has the right to assemble, produce, and distribute its products in the territory of Indonesia. ATPM in Indonesia has a dual function of being the sole agent of car sales and becoming a motor vehicle manufacturer.

Indonesia is the largest car market in Southeast Asia and the ASEAN region, controlling about one third of the total annual car sales in ASEAN, followed by Thailand in second place. In addition, Indonesia has the second largest automobile manufacturing industry in Southeast Asia and in the ASEAN region (after Thailand which controls around 50 percent of car production in the ASEAN region) (Indonesia Investments 2017). The automotive industry is one of the five priority sectors ready to enter the Fourth Industrial Revolution. Its contribution to GDP reached 10.16% in 2017 and is able to absorb direct employment of around 350 thousand people and indirect labor as many as 1.2 million people (Marketeers 2018). Car sales also increase every year; based on Gaikindo data (2016), car sales in Indonesia reached 1,061,735 units, compared to the previous year which was 1,013,291. More than half the total number of cars sold domestically in Indonesia is Toyota cars (Indonesia Investments 2017).

In Indonesia, there are various automotive companies, including Astra Daihatsu Motor, Suzuki Indomobil Motor, Toyota Motor Manufacturing Indonesia, Krama Yudha Tiga Berlian Motors, Honda Prospect Motor, and others (Gaikindo 2011). PT. Toyota Astra Motor is the leader of the automotive market that is known to be active in improving product quality and service. For more than 30 years, PT. Toyota Astra Motor has played an important role in the development of the automotive

industry in Indonesia, including in its supporting industries. Toyota as one of the leading brands in the Indonesian automobile industry and the efforts of PT Toyota-Astra Motor (TAM), as the agent of Toyota in Indonesia, to maintain the brand reputation succeed to gain wide appreciation from the consumers.

To gauge its success in maintaining the brand reputation in Indonesia, Toyota has awarded the Gold Champion for the automobile category in the WOW Brand Festive Day in 2018. Moreover, Toyota also won the Silver Champion in 2018 for its success in formulating and implementing a digital marketing strategy. Additionally, Toyota also successfully recognized as one of the Top 50 Indonesian WOW Brand in 2018. The WOW Brand Award bestowed to those brands that are highly recognized and recommended by consumers.

The automotive sector is now no longer able to rely on conventional marketing communication patterns to build the strength of its brand; moreover, nowadays, cars are part of a lifestyle, not just a product. Marketing activities are demanded to be more holistic. Marketing activities are demanded to be more holistic, so now the company is also required to touch humanism, to be environmentally friendly, and to actively engage consumers. Intrapreneurship is one of the efforts to encourage the improvement of company performance, where resources not only are encouraged to increase sales but are also able to provide added value and create creativity and innovation in their work. This study analyzed a phenomenon called “corporate entrepreneurship” or “intrapreneurship.” The purpose of this study was to find out whether knowledge sharing and organizational capabilities have an influence on intrapreneurship.

## 2 Literature Review

### 2.1 Intrapreneurship

The literature of entrepreneurship and management revealed that corporate entrepreneurship or intrapreneurship is a phenomenon of organizational entrepreneurship that has a growing trend in the past decade. Antonic (2001) illustrated that entrepreneurship in organizations can be studied at various levels of investigation. The most important thing in this case is whether to be an individual or become an individual in an organization. At the organizational level, research was conducted on the creation of new businesses in companies (which emphasize the differentiation of new and appropriate types of businesses) and in entrepreneurial organizations (especially emphasizing the characteristics of the organization). The similarities and differences between entrepreneurship and intrapreneurship are shown in Table 1.

As explained in the previous section, intrapreneurship or corporate entrepreneurship (CE) is not the only designation of entrepreneurship within organizational boundaries. Furthermore, Amo (2006) explained that the top-down process is the characteristic of the corporate entrepreneurship in which management strategies can encourage initiatives and efforts to develop workforce in the organization. Instead,

**Table 1** Similarities and differences of entrepreneurship and intrapreneurship

Similarity	Difference
<b>Innovation</b> <ul style="list-style-type: none"> <li>– Entrepreneurs and intrapreneurs are innovative people</li> <li>– Innovation can represent new products or services, new technological processes, or improved management methods</li> </ul>	<b>Activity type:</b> <ul style="list-style-type: none"> <li>– Intrapreneurs have a character of fixing something</li> <li>– Entrepreneurs have creative characters</li> </ul>
<b>Value creation</b> <ul style="list-style-type: none"> <li>– Add further value to products and services</li> <li>– Change must be completely new and must come with a different proposal</li> </ul>	<b>Obstacles encountered</b> <ul style="list-style-type: none"> <li>– For intrapreneurs, corporate culture can be a major obstacle</li> <li>– Entrepreneurs only have one obstacle, which is very strong, namely, the market</li> </ul>
<b>Business risk</b> <ul style="list-style-type: none"> <li>– Intrapreneurial and entrepreneurial activities have a higher level of risk than usual</li> <li>– Focusing on new products, intrapreneurs make corporate money a risk</li> <li>– The risk of entrepreneurship is personal money and time</li> </ul>	<b>Sources of funding</b> <ul style="list-style-type: none"> <li>– Intrapreneurs use very large company resources</li> <li>– Entrepreneurs seek personal funding sources, with the risk of losing personal assets/wealth</li> </ul>

Source: Sasu (2003)

bottom-up is the system applied in intrapreneurship related to the proactive initiative of individual employees to improve work procedures or products and to explore and utilize business opportunities.

Hisrich (2002) described the concept of entrepreneurship as a process of creating something new with value by investing time and effort needed, as well as understanding the risks in financial, psychological, and social accompaniment, and profits in monetary, personal satisfaction, and freedom.

From the company level, Antonic (2001) outlines new exploration in business, innovation, self-renewal, and proactivity as dimensions of intrapreneurship. In addition, entrepreneurship and innovation are two complementary sides, but they are also separate from each other. Imitation behavior (non-innovative) such as opening another outlet in the company environment can show an entrepreneurial attitude. Stam (2008) viewed that entrepreneurship depends entirely on innovation. Obviously, certain different behaviors are needed in carrying out various practical activities in obtaining business opportunities. In order to start a new business, Reynolds (2007) suggested that individuals should develop products, service models, or prototypes, collect funds, and arrange operations to take advantage of these opportunities. Linguistically, the word entrepreneur strongly supports the truth that entrepreneurship is very behavior-oriented. This is based on medieval French words, *entrepreneur* and *emprendre*, each of which means “doing something” or “getting something” and “counting, taking initiative” (Wennekers 2006).

## ***2.2 Knowledge Sharing***

Knowledge sharing is defined by Park (2003) as the process of transferring knowledge from one individual to another within an organization. This is a process for gathering knowledge together among members. It is also defined as social interaction between individuals (Bock 2002). Unlike information, knowledge is locked in the human mind and part of human identity. Knowledge sharing according to Frappaolo (2006) is about the way people share and use what they know. According to Tasmin (2007), knowledge sharing is a technology-supported collaboration and integration of a social system. Other researchers agreed that knowledge sharing is related to the right mix of technologies to optimize the exchange of knowledge. Meanwhile, Kimiz (2005) adds that creating and exchanging real knowledge about activities is something that can be monitored. This can happen if the people involved are willing to collaborate together voluntarily. Exchange of knowledge can lead to the creation of new knowledge, which can be an important source of competitive advantage. Referring to Bock (2002), knowledge sharing often occurs unnaturally because many people think their knowledge is valuable and important so they do not want to share it. Thus, the practice of sharing knowledge is motivated and carried out by the individual level. Even without a strong explanation in the organization, knowledge sharing can be accepted by employees if it suits the benefits and costs of individuals (Hanan 2007). The practice of knowledge sharing will ultimately help organizations become more profitable and invincible.

The discussion of knowledge sharing is found in many literature based on various perspectives and at various levels of the organization. It can be concluded from various literatures that knowledge sharing behavior can be learned from the perspectives of organizations (Argote 2000), departments or groups (Hansen 2001), and also individuals (Ipe 2003). Knowledge sharing studies from an organizational perspective generally focus on knowledge transfer or technology transfer. Technology transfer is basically the transfer of technology and knowledge from one entity to another or through long-term relationships and information exchange (Giroud 2000). The study of technology transfer has a main focus on how much knowledge is transferred from one organization to another and what factors contribute to this process. Similarly, studies from a group perspective aim to look for factors that facilitate the transfer of knowledge from one group to another. And finally, studies from an individual perspective, which is the main interest of this research, only relate to individual behavior. In particular, this study examines factors and identifies what motivates individuals to do knowledge sharing.

## ***2.3 Linking Knowledge Sharing and Intrapreneurship***

Bryant (Peter 2015) provided a new definition of entrepreneurship and argued that entrepreneurship identifies and utilizes new opportunities to create chain value.

These values can be commercial, social or cultural, and organizational possibilities. Through this research, researchers studied the definition and concept of intrapreneurship and explained the process of developing entrepreneurship since its emergence in the eighteenth century, during the Industrial Revolution until now. He also explained that entrepreneurship can be used in a broader sense in organizations as a process of utilizing new ways to exploit opportunities and create value, even when the resources needed are not around. According to Sohrabi (2016) in a study entitled “Information Security Model in Knowledge Sharing,” knowledge sharing plays a major role for people in organizations. According to Ramadani et al. (2017), the company performance is influenced by knowledge spillovers and innovation activities as well as foreign ownership and skilled worker. So this is related to how human resources in the company utilize their knowledge to create innovation in their work. Dhewanto et al. (2014) stated that information and knowledge can be obtained from anywhere, both directly and indirectly and both internally and externally, and will help businesses to advance their business. Interaction between business actors and various parties can provide added value to creativity and innovation as part of the intrapreneurship process. Knowledge sharing must have a small risk in developing company information with its competitors. In an article entitled “Experiments on Knowledge Sharing in the World Bank” (Morris 2015), they stated in a competitive world and this technological era, knowledge sharing can be applied effectively.

Based on the purpose of this study, the authors make the hypothesis as follows:

**H<sub>1</sub>: There is an effect of knowledge sharing on intrapreneurship.**

## ***2.4 Organizational Capabilities***

The basic assumption of “ability view” is that companies have a way of doing things, solving organizational problems, and demonstrating sustainable company capabilities (Dosi 2000). However, heterogeneous companies carry out different organizational routines, even when they run the same industry and produce the same outputs. A corporate specific way is based on the capabilities of the organization gradually accumulated and formed within the company. It can be concluded that organizational capabilities allow companies to deal with organizational problems effectively in a specific way depending on their respective companies (Dosi 2000). This can be done by providing more knowledge to the company. Dosi (2000) identified organizational capabilities as the way a company carries out certain activities. Core capability is the ability of companies to realize that the knowledge they have is something unique and an advantage over other competitors. It is widely agreed that corporate competitiveness will depend on how some core capabilities are developed. Companies begin to gain competitive advantages from a small number of group capabilities that are able to maintain their competitiveness. The basic implication of

this approach is that “special abilities” will continually shape the company’s performance.

A stable and consistent organizational capability will give companies a different competitive advantage, because they have been applied and developed further in the long term. Accumulation of organizational capabilities and the options available for the organization to further develop them are limited. In fact, the company’s specific abilities will make them very valuable, because they are pastoral and difficult to transfer and imitate. Dosi (2000) distinguishes ability as a broader concept, on the one hand, and as a narrow concept of competency, on the other.

## ***2.5 Connecting Organizational Capabilities with Intrapreneurship***

Corporate entrepreneurship or intrapreneurship refers to Ireland et al. (2009) definition which is entrepreneurial activities in organizations designed to revitalize the company’s business by changing the competitive profile or emphasizing innovation. Corporate entrepreneurship is very important for the success and survival of a company from time to time. It takes a deep understanding of organizational attributes to be able to change accidental recognition from innovative opportunities into systematic organizational characteristics to replicate entrepreneurial behavior almost automatically over time (Ireland et al. 2009). This prevailing approach unveils that the occurrence of entrepreneurial action in the company’s strategic process and subsequent validation does not necessarily indicate the presence of CE strategies and organizational processes that can be relied upon to replicate innovation over time (Ireland et al. 2009). Exploitation of entrepreneurial opportunities is interpreted as a systematic feature of even innovative organizations but as a result of accidental efforts is chosen and becomes a strategy that is deliberately included by the company (Ardichvili 2003).

Based on the purpose of this study, the authors make the hypothesis as follows:

**H<sub>2</sub>: There is an organizational capability influence on intrapreneurship.**

## **3 Method**

The research method used is quantitative. The survey approach is conducted to test the causal relationship between empirically observed variables. The survey was conducted on 209 Toyota car salespeople, of which 209 workers were chosen proportionally randomly from 409 salespeople in 27 Toyota authorized dealers in West Java. Next, they were asked to respond to each statement contained in the questionnaire during the November 2018 period. All of data is shown in Table 2. Data analysis was performed using multivariate statistics structural equation



**Table 2** Research data

No.	Dealer's name	Sales	Proportion	Sample	Number of samples
1	Astrido Toyota Bekasi	21	0.05	11	8
2	Astrido Toyota Pondok Gede	21	0.05	11	8
3	Auto2000 Toyota Cirebon	8	0.02	4	5
4	Auto2000 Asia Afrika	24	0.06	12	15
5	Auto2000 Bekasi Timur	13	0.03	7	6
6	Auto2000 Cibinong	22	0.05	11	8
7	Auto2000 Cibiru	22	0.05	11	8
8	Auto2000 Pasteur	24	0.06	12	10
9	Auto 2000 Siliwangi Bekasi Barat	9	0.02	5	6
10	Auto2000 Soekarno Hatta	21	0.05	11	13
11	Auto2000 Bogor Siliwangi	10	0.02	5	8
12	Auto2000 Bogor Yasmin	10	0.02	5	6
13	CV. Sinar Mas Toyota Tasikmalaya	9	0.02	5	5
14	Rejeki Toyota Cirebon	8	0.02	4	4
15	Rejeki Toyota Sumedang	9	0.02	5	4
16	Setiajaya Mobilindo Cibubur	19	0.05	10	9
17	Setiajaya Mobilindo Cimanggis	19	0.05	10	8
18	Setiajaya Mobilindo Depok Margonda	22	0.05	11	10
19	Setiajaya Mobilindo Pajajaran	22	0.05	11	10
20	Toyota Auto 2000 Indramayu	7	0.02	4	4
21	Toyota Auto 2000 Karawang	8	0.02	4	4
22	Toyota Budi Jaya Mobilindo Garut	6	0.01	3	6
23	Toyota Cianjur	8	0.02	4	5
24	Toyota Cikarang	10	0.02	5	7
25	Toyota Sukabumi	7	0.02	4	5
26	Tunas Toyota Jatiwangin	18	0.04	9	12
27	Wijaya Toyota Dago	28	0.07	14	15
		405	1	208	209

modeling. Structural equation modeling was used to test hypothesis and tries to test between variables (measurement testing) and test the feasibility of the forming factors of each variables (confirmatory factor analysis). For our study, data processing uses AMOS 20. The following criteria are generally used to measure model fit: the chi-square ( $\chi^2$ ) likelihood ratio statistic, the goodness-of-fit index (GFI), the normed fit index (NFI), the comparative fit index (CFI), and the root-mean-square error of estimation (RMSEA).

## 4 Result and Discussion

The results of AMOS output for data normality assessment indicate that the critical ratio multivariate value of  $-1.752$  is at a value of  $< -2.58$  c.r.  $< 2.58$  (Table 3), meaning that the data is normally distributed.

Table 3 shows the results of normality testing in this study as one of the requirements in meeting the classical assumptions. Normality test are used to determine if a data set is well-modeled by a normal distribution and to compute how likely it is for a random variable underlying the data set to be normally distributed.

Furthermore, the suitability testing of the model uses several criteria, namely, the value of chi-square, significance probability, CMIN/DF, RMSEA, TLI, NFI, and CFI. The results of the test after modification are summarized in Table 4 (Cutoff value). It shows that the planned model is acceptable, because the value of the suitability test criteria compared to the cutoff value model equation shows good results.

**Table 3** Assessment of normality

Variable	Skew	c.r.	Kurtosis	c.r.
Strategic capabilities	0.100	0.591	-0.595	-1.755
Integrative capabilities	0.066	0.388	-0.720	-2.126
Functional capabilities	0.132	0.779	-0.513	-1.514
Understanding of market demand	-0.034	-0.204	-0.676	-1.995
Ability	0.269	1.589	-0.437	-1.288
Proactiveness	-0.223	-1.316	-0.486	-1.435
Self-renewal	-0.107	-0.633	-0.627	-1.852
Innovativeness	-0.102	-0.604	-0.750	-2.215
New business venturing	-0.077	-0.452	-0.681	-2.009
Organization factor	0.141	0.830	-0.539	-1.590
Group factors	0.229	1.349	-0.600	-1.770
Individual factors	0.112	0.660	-0.751	-2.216
<b>Multivariate</b>			<b>-4.444</b>	<b>-1.752</b>

**Table 4** Cutoff value

Criteria	Cutoff value	Model	Description
<i>Chi-square (CMIN)</i>	Near to 0	53.037	Marginal
<i>Significance probability</i>	$\geq 0.05$	0.396	Fit
CMIN/DF	$\leq 2.00$	1.040	Fit
RMSEA	$\leq 0.08$	0.014	Fit
TLI	$\geq 0.90$	0.995	Fit
NFI	$\geq 0.90$	0.905	Fit
CFI	$\geq 0.95$	0.996	Fit

**Table 5** Regression weights

			Estimate standardized	S.E.	C.R.	P	Code
Intrapreneurship	<---	Knowledge sharing	0.461	0.363	3.369	***	par_6
Intrapreneurship	<---	Organization capability	0.659	0.104	4.189	***	par_11
Individual factors	<---	Knowledge sharing	0.583				
Group factors	<---	Knowledge sharing	0.572	0.140	6.843	***	par_1
Organization factors	<---	Knowledge sharing	0.536	0.133	6.506	***	par_2
New business venturing	<---	Intrapreneurship	0.570				
Innovativeness	<---	Intrapreneurship	0.452	0.132	5.791	***	par_3
Self-renewal	<---	Intrapreneurship	0.554	0.138	6.779	***	par_4
Proactiveness	<---	Intrapreneurship	0.519	0.138	6.434	***	par_5
Ability	<---	Organization capability	0.401				
Understanding market demand	<---	Organization capability	0.443	0.278	4.355	***	par_7
Functional capabilities	<---	Organization capability	0.519	0.282	4.688	***	par_8
Integrative capabilities	<---	Organization capability	0.549	0.323	4.759	***	par_9
Strategic capabilities	<---	Organization capability	0.471	0.283	4.503	***	par_10

Model causality testing can be analyzed through the results of regression weights (shown in the Table 5) between latent variables. Based on Table 5, it can be seen that the knowledge sharing variable affects intrapreneurship with a regression weight of 0.461 and a probability value of <0.05. Likewise, the organization capability variable has a significant effect on intrapreneurship with a regression weight of 0.659 and a probability value of <0.05. And the model of structural equation for this research is shown in Fig. 1.

Our research proves that knowledge sharing and organizational capabilities affect intrapreneurship. This supports Sohrabi’s statement stating that knowledge sharing plays a major role for employees within the organization. At the same time, knowledge sharing must face little risk in developing company information with its competitors. In addition, this study also supports Ireland et al. statement that intrapreneurship is important for the success and survival of companies from time to time that requires a deep understanding of organizational attributes that can change the recognition of innovative opportunities into systematic organizational characteristics, allowing replication of entrepreneurial behavior almost automatically from time to time.

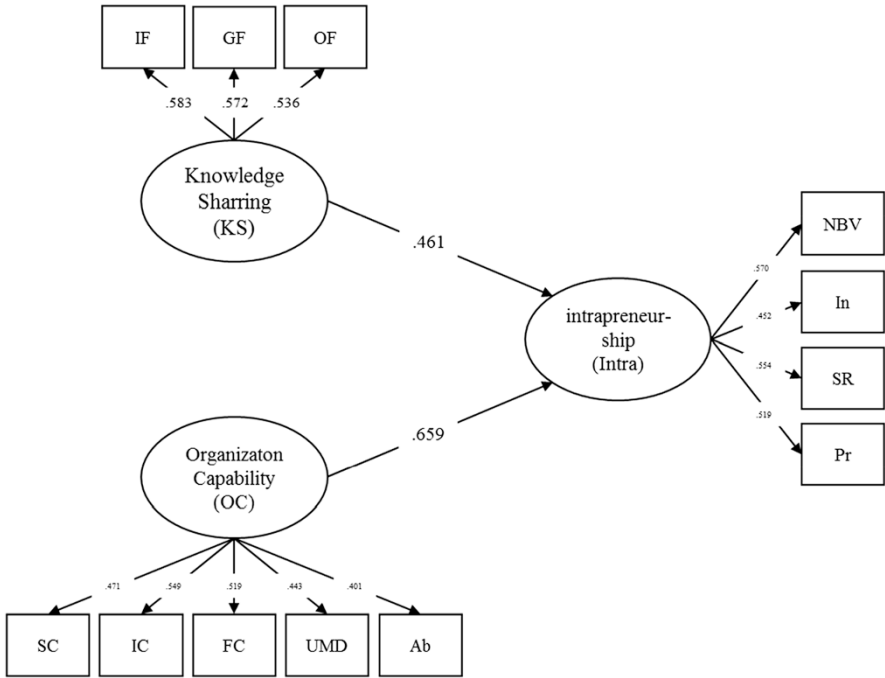


Fig. 1 Structural equation model

Confirmatory Factor Analysis (CFA) is used to reveal any possible factors that could emerge from a set of variables. Those factors are knowledge sharing, organizational capabilities, and intrapreneurship. The forming factor of knowledge sharing is individual factors, group factors, and organizational factors. Individual factors have a regression weight of 0.583 with a probability value of 0.00 smaller than the probability value of 0.05 indicating that individual factors are forming variables of knowledge sharing. The results show the same value for group factors and organization factors. Supporting opinions (Tasmin 2007) knowledge sharing is a technology-supported collaboration and integration of a social system. So it is defined as social interaction not only between organizations but also between individuals.

The forming factor of organization capabilities is strategic capabilities, integrative capabilities, functional capabilities, understanding of market and demand, and ability.

Strategic capabilities have a regression weight of 0.471 with a probability value of 0.00 smaller than the probability value of 0.05 indicating that strategic capabilities are forming variables of organization capabilities. The results show the same value for other variables. As explained by Dosi (2000)), organizational capabilities allow companies to deal with organizational problems effectively in a specific way

depending on their respective companies. This can be done by providing more knowledge to the company.

The forming factor of intrapreneurship is new business venturing, innovativeness, self-renewal, and proactiveness. New business venturing have a regression weight of 0.570 with a probability value of 0.000 smaller than the probability value of 0.05 indicating that new business venturing is forming variables of intrapreneurship. The results show the same value for other variables. This study is supported by a study conducted by Antonic (2001) that for the company level, innovativeness is a thing that needs more attention.

## 5 Conclusion and Recommendation

The findings of this study indicate that knowledge sharing and organizational capabilities clearly affect intrapreneurship. Organizational factors have a dominant influence in increasing the value of intrapreneurship. Viewed from the management side, linking opportunities with processes can improve their abilities beforehand. Organizational factors can offer other avenues to improve the company's prospects in identifying and pursuing entrepreneurial strategies, without disrupting the basic political development and legitimacy processes.



Based on the conclusion, the study recommends that companies need to build intrapreneurship capabilities by making policies that will have a direct impact, so that every employee can compete to increase creativity, for example, making sales brochures as good as possible to attract consumers. This will help the organization in many ways such as updating information, innovation, creations, and others. Due to its importance, organizations could gain some advantages over the information generated from the transformation process of their employees' handling skills.

## References

- Ahmadpur. (2006). *Entrepreneurship foundations*. Persian: Fara andish Publisher.
- Amo. (2006). *Corporate entrepreneurship and intrapreneurship related to innovation behaviour among employees, paper for the 'Entrepreneurship from the employee's perspective' .. Jena*.
- Antonic, H. R. (2001). Intrapreneurship: Construct refinement and cross-cultural validation. *Journal of Business Venturing*, 495–527.
- Ardichvili, A. (2003). A theory of entrepreneurial opportunity identification and development. *Journal of Business Venturing*, 105–123.
- Argote, I. P. (2000). Knowledge transfer in organizations: Learning from the experience of other. *Organizational Behavior and Human Decision Processes*, 1–8.
- Bock. (2002). Breaking the myths of rewards: An exploratory study of. *Information Resources Management Journal*, 14–21.
- Dhewanto, W., Mulyaningsih, H. D., Permatasari, A., Anggadwita, G., & Ameka, I. (2014). *Manajemen Inovasi, Peluang Sukses Menghadapi Perubahan. Edisi Pertama*. Yogyakarta: CV Andi Offset.

- Dosi, N. W. (2000). Introduction: The nature and dynamics of organizational capabilities. *The nature and dynamics of organizational capabilities*, 1–22.
- Emami, N. (2004). The mechanism of entrepreneurship in the large organization. *Journal of Management*.
- Frappaolo. (2006). *Knowledge management*. England: Capstone Publishing Ltd..
- Gaikindo. (2011). *Indonesia automobile industry data*. [Online] <https://www.gaikindo.or.id/indonesian-automobile-industry-data/>. Accessed February 2019.
- Giroud, A. (2000). Japanese transnational corporations' knowledge transfer to Southeast Asia: The case of the electrical and electronics sector in Malaysia. *International Business Review*, 9, 571–586.
- Hanan, S. (2007). Knowledge sharing behavior from game theory and socio-psychology perspectives. *40th Annual Hawaii International Conference on System Sciences (HICSS'07)*, 1–10.
- Hansen, M. T. (2001). Different knowledge, different benefits: Toward a productivity perspective on knowledge sharing in organizations. *Academy of Management Proceedings*, MC:C1-MC:C6.
- Hisrich. (2002). *Entrepreneurship*. New York: McGraw-Hill Irwin.
- Indonesia Investments. (2017). *Industri Manufaktur Otomotif Indonesia*. [online] <https://www.indonesia-investments.com/id/bisnis/industri-sektor/otomotif/item6047?> Accessed February 2019.
- Ipe, M. (2003). Knowledge sharing in organizations: A conceptual framework. *Human Resource Development Review*, 337–359.
- Ireland, R. D., Covin, J. G., & Kuratko, D. F. (2009). Conceptualizing corporate entrepreneurship strategy. *Entrepreneurship Theory and Practice*, 33(1), 19–46.
- Kimiz, D. (2005). *Knowledge Management in Theory and Practice*. Oxford: Elsevier ButterworthHeinemann.
- Marketeers. (2018). *Menilik Investasi Industri Otomotif Tahun 2018*. [Online] <http://marketeers.com/menilik-investasi-industri-otomotif-tahun-2018/>. Accessed February 2019.
- Morris, S. (2015). *Scaling up your story: an experiment in global knowledge sharing at the World Bank, long range planning*. Scaling up your story: An experiment in global knowledge sharing at the World Bank, long range planning. Retrieved from <https://doi.org/10.1016/j.lrp.2015.02.002>
- Park. (2003). *A study on the knowledge sharing behavior of local public servants in Korea*. Retrieved from <http://www.kapa21.or.kr/down/2003> <http://www.kapa21.or.kr/down/2003>
- Peter. (2015). *Entrepreneurship and organizations*. International: Encyclopedia of the Social & Behavioral Sciences.
- Ramadani, V., Abazi-Alili, H., Dana, L. P., Rexhepi, G., & Ibraimi, S. (2017). The impact of knowledge spillovers and innovation on firm-performance: Findings from the Balkans countries. *International Entrepreneurship and Management Journal*, 13(1), 299–325.
- Reynolds, D. P. (2007). New firm creation in the United States. *a PSDE I overview, Foundations and Trends in Entrepreneurship*, 1-150.
- Sasu, C. (2003). *Inițierea și dezvoltarea afacerilor*. Editora Polirum.
- Sohrabi, N. (2016). An information security knowledge sharing model in organizations. *Computers in Human Behaviour*, 57, 442–451.
- Stam, E. (2008). Entrepreneurship and innovation policy. *Jena Economic Research Paper*, 006.
- Tasmin. (2007). Relationship between corporate knowledge management and the firm's innovation capability. *International Journal of Services Technology and Management*, 62–79.
- Wennekers, S. (2006). *Entrepreneurship at country level; economic and non-economic determinants*. Rotterdam: ERIM.

# Links and Demographic Comparisons to Conflict Management and Counterproductive Work Behavior

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**Abstract** According to contemporary theory in Management Science, conflicts are inevitable and necessary for organizations, indeed. Managing conflicts shows clearly differences between good and perfect managers and entrepreneurs. In this respect, conflict management styles are emerging as a meaningful tool for dealing with the counterproductive work behaviors which are anti-innovative behaviors. The purpose of the present study is to determine the effects of conflict management on counterproductive work behavior and also make demographic comparisons to these variables. The sample is composed of 200 white-collar employees. Data were collected through survey technique with convenience sampling method and analyzed via statistical package programs. Results show that conflict management styles, integrating, dominating, and compromising, have significant effect on counterproductive work behavior dimensions. Integrating reduces organizational deviance, dominating increases interpersonal deviance, and compromising reduces both interpersonal and organizational deviance. Besides, perceptions about conflict management and counterproductive work behavior vary depending on demographic characteristics. Integrating is perceived mostly by female participants in comparison with males. Dominating is perceived mostly by private sector employees in

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comparison with public ones. Younger employees perceive conflict management and its two dimensions, obliging and compromising, more than their elders. Males are in tendency to behave counterproductive in comparison with females. Counterproductive work behavior and its one-dimensional, organizational deviance are performed less by younger employees and more by employees educated at post-graduate degree.

**Keywords** Conflict management · Counterproductive work behavior · Deviant behavior

## 1 Introduction

Although every individual in any organization come together to achieve a common goal, problems may arise from differences in personal characteristics, status, values, and perceptions. Along with the communication problems, scarce resources and management style may be a source of conflict in intraindividual, interindividual, intragroup, and intergroup levels (Riggio 2003; Graham 2009). These conflicts have an effect on the attitudes and behaviors of the employees and may cause counterproductive work behavior, which are defined as “behaviors intended to hurt the organization or other members of the organization” (Spector and Fox 2002: 271). In this context, the rationale behind carrying out this study is to determine the relationship between conflict management—defined as “directing the disagreements and unrests in order to create positive outcomes for the organization (Akkirman 1998: 2)” —and counterproductive work behavior.

According to the contemporary theory in Management Science, conflicts are considered as one of the inevitable aspects within the organizations, and it is impossible to totally eliminate them. Thus, the role of a manager is to manage conflicts in order to add value to the organization (Kocel 2013). Managing conflicts effectively manifests the difference between good and perfect managers and entrepreneurs (Graham 2009). Since the counterproductive work behavior are anti-innovative behaviors, therefore, counterproductive work behaviors need to be directed effectively. In order to achieve this, it is important to determine the suitable conflict management style. In this study, the relationship between conflict management and counterproductive work behavior and also demographic differences towards these variables was analyzed through empirical methods.

In the following parts of the study, the concepts of conflict management and counterproductive work behavior are primarily explained with their dimensions. Afterwards, information about the method of the study and the obtained findings are given. Finally, the results and conclusions of the study were discussed in the last section, and recommendations were provided to the managers, entrepreneurs, and future researches.



## **2 Conceptual Framework**

### **2.1 Conflict Management**

Conflict management benefits from the differences that create disagreements among people or groups. The benefits of the conflict management should support the productivity of the organization. Conflict management approach involves planning and executing effective strategies to minimize the dysfunctional consequences of conflict and maximize the functional ones to encourage learning, creativity, and organizational productivity (Rahim 2002). In the literature, conflict management has five dimensions. They are also called *conflict management styles*. The dimensions are integrating, obliging, dominating, avoiding, and compromising.

#### **2.1.1 Integrating**

Integrating focuses on collaboration between different parties. While using integrating as a conflict management style, the aim is to reach a reasonable solution for all parties. Making promises to be honest to the other party, to ensure continuity to exchange of information, and discussing opposite thoughts frankly are the examples of this dimension (Rahim and Magner 1995). Besides, this style is called *problem-solving* (Chang and Zelihic 2013).

#### **2.1.2 Obliging**

When using obliging, it is crucial to ignore disagreements and bring common views into the forefront to please the other party (Rahim and Magner 1995). Generally, this method is used when power distance is high between the groups. A conflict between a manager and an employee is an example of this dimension. A depiction of obliging may be seen if a subordinate experience a conflict with his/her manager and accept what the manager wants (Karcioglu and Aliogullari 2012; Karip 1999).

#### **2.1.3 Dominating**

Dominating can be defined as a win-lose approach or forcing behaviors to gain benefit (Rahim and Magner 1995). While using this method, the needs and wants of the other party are ignored (Rahim 2002).

### **2.1.4 Avoiding**

Withdrawal and pass the buck are the keywords of avoiding. As a short-term-oriented method, it is based on staying away from the disagreements (Kocel 2013).

### **2.1.5 Compromising**

Compromising is about sacrificing to reach a solution that is reasonable for both parties (Rahim and Magner 1995). When the parties have an equal level of power or when the negotiation process reach deadlock, compromising can be used as a useful method (Rahim 2002).

## **2.2 Counterproductive Work Behavior**

Counterproductive work behavior can be described as hurting the organization or a member of the organization intendedly (Spector and Fox 2002; Gokcen-Kapusuz and Cavus 2017). In other words, counterproductive work behavior is defined as conscious behaviors which create a threat to the well-being of the organization or its members and violate the organizational norms or values (Robinson and Bennett 1995). Counterproductive work behavior has two dimensions: interpersonal deviance and organizational deviance (Bennett and Robinson 2000). If the damage is on the member or members of the organization, it is named as interpersonal deviance; and if the organization is damaged, it is called organizational deviance.

### **2.2.1 Interpersonal Deviance**

Interpersonal deviance can be defined as deviances that directed or targeted at members of the organization. At work, spreading rumors and physical violence, making fun of someone, saying hurtful things to someone, and acting rudely towards someone are some of the examples of interpersonal deviance (Bennett and Robinson 2000).

### **2.2.2 Organizational Deviance**

Organizational deviance is explained by taking a property without permission, spending too much time fantasizing or daydreaming instead of working, absenteeism, intentionally work slower than you could do, falsifying a receipt to get reimbursed for more money than you spend on business expenses, sharing confidential

information, and using an illegal drug or consuming alcohol on the job (Robinson and Bennett 1995).

### 3 Materials and Methods

The research was conducted within the scope of quantitative research pattern and correlational research design. In this context, convenience sampling method and survey technique were used. Surveys were submitted to 212 white-collar employees in Adana/Turkey, working in various businesses for public and private sector organizations. Due to the missing value, 12 of the surveys were excluded, and 200 of the surveys were analyzed via statistical package programs ( $n = 200$ ).

Reliability analysis was used to test the internal consistency of scales. In order to understand how the respondents' perceptions of conflict management and counterproductive work behavior differ depending on demographical characteristics, Independent Samples *t* Test and one-way ANOVA analysis were applied. Pearson correlation analysis was used to understand the relationships among the dimensions of conflict management and counterproductive work behavior. Finally, multiple linear regression analysis was applied to measure the variance of the counterproductive work behavior that is explained by conflict management, the independent variable in this research.

#### 3.1 Sample

The demographic characteristics of the 200 participants are as follows: 110 (55%) respondents are female and 90 (45%) respondents are male. 121 (60.5%) respondents are between 26 and 35 years old, 45 (22.5%) are between 36 and 45 years old, 18 (9.0%) respondents are between 46 and over years old, and 16 (8.0%) respondents are between 18 and 25 years old. 91 (45.5%) respondents have bachelor's degree, 54 (27.0%) respondents have post-graduate degree, 29 (14.5%) respondents have high school degree, 15 (7.5%) respondents have associate degree, and 11 (5.5%) respondents have primary school degree. 137 (68.5%) respondents work in private sector organizations and 63 (31.5%) respondents work in public sector organizations. The majority of the respondents' current job tenure is between 2 and 8 years (87/43.5%), and total job tenure is between 2 and 8 years (89/44.5%).

#### 3.2 Measures

Conflict management is measured by Rahim Organizational Conflict Inventory-II (ROCI-II) by Rahim and Magner (1995). It consists of 5 dimensions and 28 items.

The dimensions are as follows: integrating (7 items), obliging (6 items), dominating (5 items), avoiding (6 items), and compromising (4 items). Participants responded these items using the 5-point Likert scale (1 = strongly disagree, 5 = strongly agree).

Workplace Deviance Scale, developed by Bennett and Robinson (2000), was used to measure counterproductive work behavior. It consists of 2 dimensions and 19 items. The dimensions are as follows: interpersonal deviance (7 items) and organizational deviance (12 items). Participants responded these items using the 5-point Likert scale (1 = never, 5 = every day).

The first section of the survey contains demographical questions (i.e., gender, age, level of education, organization type, current job tenure, and total job tenure). In a great many studies, Rahim Organizational Conflict Inventory-II (ROCI-II) scale and Workplace Deviance Scale were applied to samples in Turkey (Karcioglu and Aliogullari 2012; Gümüşeli 1994; Kanten et al. 2015; Dirican 2013), and these studies support factorial validity of the scales.

## 4 Findings

### 4.1 Reliability Analysis

Cronbach's alpha values of the scales were calculated to assess the internal consistency reliability (Cronbach 1951). The overall Cronbach's alpha values of conflict management scale and counterproductive work behavior scale are  $\alpha = 0.87$  and  $\alpha = 0.85$ , respectively. Cronbach's alpha coefficients for the dimensions of conflict management are  $\alpha = 0.84$  for integrating,  $\alpha = 0.72$  for obliging,  $\alpha = 0.72$  for dominating,  $\alpha = 0.74$  for avoiding, and  $\alpha = 0.72$  for compromising. For the dimensions of counterproductive work behavior, the coefficients are  $\alpha = 0.73$  for interpersonal deviance and  $\alpha = 0.81$  for organizational deviance. According to these coefficients, on the basis of generally accepted Cronbach's alpha coefficients standard ( $\alpha \geq 0.70$ ), it can be stated that the scales are reliable (Nunnally 1978).

### 4.2 Pearson Correlation Analysis and Descriptive Statistics

Five dimensions of conflict management and two dimensions of counterproductive work behavior are taken into the Pearson correlation analysis. Also, descriptive statistics of all variables are calculated. The results are given in Table 1.

According to the results, there is significant and negative relationship between integrating and organizational deviance ( $r = -0.26$ ,  $p < 0.01$ ), compromising and interpersonal deviance ( $r = -0.21$ ,  $p < 0.01$ ), and compromising and organizational deviance ( $r = -0.26$ ,  $p < 0.01$ ). Besides, no significant relationship is found between both integrating and interpersonal deviance and the other conflict

**Table 1** Pearson correlation analysis and descriptive statistics

Variables	1	2	3	4	5	6	7
1. Integrating	1						
2. Obliging	0.308**	1					
3. Dominating	0.402**	0.075	1				
4. Avoiding	0.179*	0.344**	0.112	1			
5. Compromising	0.552**	0.550**	0.271**	0.175	1		
6. Interpersonal dev.	-0.101	-0.064	0.103	-0.091	-0.217**	1	
7. Organizational dev.	-0.260**	-0.088	-0.053	-0.003	-0.266**	0.543**	1
Mean	4.05	3.49	3.60	2.90	4.05	1.38	1.45
Standard deviation	0.62	1.07	0.72	0.77	0.79	0.36	0.40

\*Shows the  $p < 0.05$  statistical significance level, \*\* shows the  $p < 0.01$  statistical significance level

**Table 2** Multiple linear regression analysis

Models		1	2			
Dependent variables		Interpersonal deviance	Organizational deviance			
Model summary	$r$	0.303	0.317			
	$R^2$	0.092	0.101			
	$F$	3.935	4.347			
	$p$	<b>0.002</b>	<b>0.001</b>			
	D-W	1.38	0.89			
Coefficients		$\beta$	$p$	$\beta$	$p$	VIF
Independent variables	Integrating	-0.036	0.681	-0.196	<b>0.024</b>	1.60
	Obliging	0.136	0.116	0.080	0.354	1.59
	Dominating	0.202	<b>0.008</b>	0.078	0.299	1.21
	Avoiding	-0.100	0.176	0.036	0.626	1.15
	Compromising	-0.310	<b>0.001</b>	-0.230	<b>0.015</b>	1.89

Note:  $r$  correlation coefficient,  $R^2$  determination coefficient,  $F$  the  $F$ -statistic,  $p$  statistical significance level,  $D-W$  Durbin-Watson statistic,  $\beta$  standardized beta coefficient,  $VIF$  variance inflation factor value

management dimensions (obliging, dominating, avoiding) and interpersonal or organizational deviance.

### 4.3 Multiple Linear Regression Analysis

To find the predictor status of conflict management dimensions on the dimensions of counterproductive work behavior, perform the multiple linear regression analysis. The results are given in Table 2.

Above all, in order to achieve the correct results in the models, we firstly checked whether there were multicollinearity and serial correlation problems. According to the variance inflation factor (VIF) values and Durbin-Watson (D-W) statistics, there weren't multicollinearity problem ( $VIF < 5$ ) and serial correlation problem ( $D-W < 2$ ) in the models (O'Brien 2007; Durbin and Watson 1971).

In the first regression model, dependent variable is the interpersonal deviance, and independent variables are the dimensions of conflict management, which are integrating, obliging, dominating, avoiding, and compromising. Results showed that it is possible to estimate the interpersonal deviance by the dimensions of conflict management [ $F_{(5,194)} = 3.935, p < 0.01$ ]. The correlation coefficient is  $r = 0.30$ , and the determination coefficient, which states how much of the variability of the dependent variable is explained by the independent variables, is  $R^2 = 0.09$ . Thus, it can be said that dimensions of conflict management explain 9% of this model. Beta values, which show the effects magnitude of independent variables on dependent variable, are the highest for compromising ( $\beta = -0.31, p < 0.01$ ) and dominating ( $\beta = 0.20, p < 0.01$ ) in a row. Other beta values are not statistically significant ( $p > 0.05$ ). According to all findings, while compromising decreases the interpersonal deviance, dominating increases it, respectively.

In the second regression model, dependent variable is the organizational deviance, and the independent variables are the dimensions of conflict management, which are integrating, obliging, dominating, avoiding, and compromising. Results showed that it is possible to estimate the organizational deviance by the dimensions of conflict management [ $F_{(5,194)} = 4.347, p < 0.01$ ]. The correlation coefficient is  $r = 0.31$ , and the determination coefficient, which states how much of the variability of the dependent variable is explained by the independent variables, is  $R^2 = 0.10$ . Thus, it can be said that dimensions of conflict management explain 10% of this model. Beta values, which show the effects magnitude of independent variables on dependent variable, are the highest for compromising ( $\beta = -0.23, p < 0.05$ ) and integrating ( $\beta = -0.19, p < 0.05$ ) in a row. Other beta values are not statistically significant ( $p > 0.05$ ). According to all findings, the organizational deviance decreased by compromising and integrating, respectively.

#### **4.4 Difference Analysis**

In order to understand how respondents' demographic variables (gender, age, education, and organization type) differ in conflict management, counterproductive work behavior and their dimensions, Independent Samples *t* Test, one-way ANOVA, and post hoc Scheffe test were used.

#### 4.4.1 Differences in Perception of Conflict Management

*T* test was used to test whether there is a statistical difference in perception of conflict management and its dimensions according to gender groups. Results showed that integrating is the only dimension that is perceived differently by male and female participants [ $F = 1.850$ ,  $p_{(\text{Levene})} > 0.05$ ,  $p_{(2\text{-tailed})} < 0.05$ ]. The mean values of integrating are  $\bar{x} = 3.94$  for males and  $\bar{x} = 4.14$  for females. Although there is not a huge difference between mean values, it is clearly seen that integrating perceptions of female participants are statistically different from (more than) the male ones.

One-way ANOVA was used to test whether there is a statistical difference in perception of conflict management and its dimensions according to age groups. Results showed that conflict management ( $F = 3.036$ ,  $p < 0.05$ ), obliging ( $F = 3.173$ ,  $p < 0.05$ ), and compromising ( $F = 3.202$ ,  $p < 0.05$ ) differ statistically in terms of age groups. However, there is no statistically difference in integrating, dominating, and avoiding dimensions ( $p > 0.05$ ). Conflict management differs only between two groups ( $p < 0.05$ ). The age groups are 18–25 and 46 and over. Mean values of the groups for conflict management are highest for 18–25 ages ( $\bar{x} = 3.79$ ) and then 46 and over ages ( $\bar{x} = 3.32$ ). Obliging differ only between two groups ( $p < 0.05$ ). The age groups are 18–25 and 26–35. Mean values of the groups for obliging are highest for 18–25 ages ( $\bar{x} = 4.26$ ) and then 26–35 ages ( $\bar{x} = 3.45$ ). Similarly, compromising differ only between two groups ( $p < 0.05$ ). The age groups are 18–25 and 26–35. Mean values of the groups for compromising are the highest for 18–25 ages ( $\bar{x} = 4.62$ ) and then 26–35 ages ( $\bar{x} = 4.00$ ). It can be understood from the results that although the difference in the mean scores is not huge on looking at the statistics, younger employees perceive conflict management and its two dimensions, obliging and compromising, more than their elders.

One-way ANOVA was used to test whether there is a statistical difference in perception of conflict management and its dimensions in terms of education level. According to results, no significant difference is found among education level in conflict management and all dimensions ( $p > 0.05$ ).

*T* test was used to test whether there is a statistical difference in perception of conflict management and its dimensions according to organization type. Results show that perception of dominating is higher for private sector employees [ $F = 0.453$ ,  $p_{(\text{Levene})} > 0.05$ ,  $p_{(2\text{-tailed})} < 0.01$ ]. While the mean value for dominating is  $\bar{x} = 3.74$ , for private sector employees,  $\bar{x} = 3.30$  for public sector ones. There is no significant difference in conflict management and its other dimensions ( $p > 0.05$ ). Even though there is not a huge difference between the mean values, it is seen that dominating perceptions of private sector employees are statistically different from (more than) the public sector ones.

#### 4.4.2 Differences in Counterproductive Work Behavior

T test was used to test whether there is a difference in counterproductive work behavior and its dimensions according to gender groups. According to results, gender makes a difference in counterproductive work behavior [ $F = 2.827$ ,  $p_{(\text{Levene})} > 0.05$ ,  $p_{(2\text{-tailed})} < 0.01$ ], interpersonal deviance [ $F = 2.839$ ,  $p_{(\text{Levene})} > 0.05$ ,  $p_{(2\text{-tailed})} < 0.01$ ], and organizational deviance [ $F = 3.106$ ,  $p_{(\text{Levene})} > 0.05$ ,  $p_{(2\text{-tailed})} < 0.05$ ]. Mean values of counterproductive work behavior are highest for male ( $\bar{x} = 1.50$ ) and then female ( $\bar{x} = 1.35$ ). Mean values of interpersonal deviance are highest for male ( $\bar{x} = 1.47$ ) and then female ( $\bar{x} = 1.30$ ). Mean values of organizational deviance are highest for male ( $\bar{x} = 1.52$ ) and then female ( $\bar{x} = 1.38$ ). It can be understood from the results that even so the difference in the means is not huge, in terms of statistics, males are in tendency to behave counterproductive work behaviors in comparison with females.

One-way ANOVA was used to test whether there is a difference in counterproductive work behavior and its dimensions according to age groups. The results showed that age groups make a difference in counterproductive work behavior ( $F = 4.640$ ,  $p < 0.01$ ), interpersonal deviance ( $F = 4.300$ ,  $p < 0.01$ ), and organizational deviance ( $F = 3.354$ ,  $p < 0.05$ ). Counterproductive work behavior differs only between two groups ( $p < 0.05$ ). The age groups are 18–25 and 26–35. Mean values of the groups for counterproductive work behavior are highest for 26–35 ages ( $\bar{x} = 1.48$ ) and lowest for 18–25 ages ( $\bar{x} = 1.23$ ). Interpersonal deviance differs only between two groups ( $p < 0.05$ ). The age groups are 18–25 and 26–35. Mean values of the groups for interpersonal deviance are the highest for 26–35 ages ( $\bar{x} = 1.44$ ) and lowest for 18–25 ages ( $\bar{x} = 1.16$ ). And according to post hoc test, organizational deviance makes no significant differences among the age groups ( $p > 0.05$ ). It can be understood from the results that even so the difference in the means is not huge, in terms of statistics, counterproductive work behavior and its one-dimensional, organizational deviance are performed less by younger employees.

One-way ANOVA was used to test whether there is a statistical difference in counterproductive work behavior and its dimensions in terms of education level. The results showed that education level makes a difference in counterproductive work behavior ( $F = 4.276$ ,  $p < 0.01$ ) and organizational deviance ( $F = 4.793$ ,  $p < 0.01$ ). Education level makes no significant differences in interpersonal deviance ( $p > 0.05$ ). Counterproductive work behavior differs only between two education levels ( $p < 0.05$ ). The education level is post-graduate degree and high school degree. Mean values of the education level for counterproductive work behavior are the highest for post-graduate degree ( $\bar{x} = 1.52$ ) and then high school degree ( $\bar{x} = 1.27$ ). Organizational deviance differs only between three education levels ( $p < 0.05$ ). The education level is post-graduate degree, associate degree, and high school degree. Mean values of the education level for organizational deviance are highest for post-graduate degree ( $\bar{x} = 1.57$ ), high school degree ( $\bar{x} = 1.26$ ), and then associate degree ( $\bar{x} = 1.22$ ). It can be understood from the results that even so the difference in the means is not huge, in terms of statistics, counterproductive work



behavior and its one-dimensional, organizational deviance are performed mostly by employees who have post-graduate degree.

T test was used to test whether there is a difference in counterproductive work behavior and its dimensions in terms of organization type. According to the results, no significant difference is found between organization type in counterproductive work behavior and all dimensions ( $p > 0.05$ ).

## 5 Discussion

This study focuses on the effect of employees' perceptions of conflict management on counterproductive work behavior. Besides, differences in employees' perceptions of conflict management and counterproductive work behavior based on demographic variables are discussed.

The findings of this study showed that there are significant relations among some dimensions of conflict management and counterproductive work behavior. These are the relationships between integrating-organizational deviance, dominating-interpersonal deviance, compromising-interpersonal deviance, and compromising-organizational deviance. Obliging and avoiding do not have any significant relation with either interpersonal or organizational deviance. These relations show that which conflict management styles have an effect on which counterproductive work behavior dimensions. In this context, integrating decreases organizational deviance, whereas dominating increases interpersonal deviance. On the other hand, compromising is a suggested conflict management tool to prevent both interpersonal and organizational deviance. The findings may be used as a guideline both for managers and entrepreneurs.

Researchers in the conflict management field found that an effective conflict management will have a positive impact on development creativity, innovation, and efficiency, which ensure organizational commitment and job satisfaction (De-Dreu 1997; Pelled et al. 1999; Chan et al. 2008; Graham 2009; Tjosvold and Chia 1989; Ahmed and Ahmed 2015). On the other hand, in situations which conflict management is poorly managed, adaptation, communication, and motivation decrease, and this leads to alienation and turnover (Sotile and Sotile 1999; Graham 2009; Robbins 1978). And as for this study, each dimension of conflict management is discussed according to its positive or negative effect on counterproductive work behavior dimensions.

In the related literature, Kessler et al. (2013) analyzed the relationship between leadership, conflict, and counterproductive work behavior. Their findings showed that interindividual conflicts are among the source of counterproductive work behavior. In another study by Boddy (2014), it is analyzed that how conflicts and employees who have mental disorders have an effect on emotional well-being and counterproductive work behavior. His findings suggested that employees who have mental disorders create conflicts which cause counterproductive work behavior.

On the other hand, in this study, how can be handle the counterproductive work behavior via conflict management styles in an organization is discussed. This research has an original value and important contributions to the literature. In this context, this is the first study which investigates the relationship between the perception of conflict management and counterproductive work behavior within the framework of white-collar employees.

Rahim's five dimensions of conflict management are classified into cooperative and uncooperative conflict management methods. According to this classification, integrating, obliging, and compromising are the elements of the cooperative side. Dominating and avoiding are on the uncooperative side (Rahim et al. 2000; Song et al. 2000). With regard to employee behaviors, cooperative conflict management methods create positive outcomes, and uncooperative conflict management methods cause negative outcomes (Meyer 2004; Rahim and Buntzman 1989; Weider-Hatfield and Hatfield 1996; Ohbuchi and Kitanaka 1991; Pruitt and Carnevale 1993). If there is a decrease in counterproductive work behavior, it is a positive output, whereas an increase in these behaviors is a negative one. Taking this view into account, the findings of this study are partially parallel with the cooperative-uncooperative classification, because the effects of integrating, compromising, and dominating match the classification, while the effects of obliging and avoiding unmatched it.

## 6 Conclusions

At first, conflicts were considered as a damaging element that needs to be eliminated. Eventually, conflicts—in a reasonable level—started to be welcomed due to its positive effects on organizational productivity, problem-solving ability, performance, and creativity (Simsek et al. 1998; Akova 2015).

Conflicts, *sometimes openly, subtly*, or in an obscure way, hurt organizations. Counterproductive work behavior shows up as conscious behaviors which create a threat to the well-being of the organization or its members and violate the organizational norms or values (Robinson and Bennett 1995). In this context, counterproductive work behavior resembles conflicts, and the importance of this study lies in the fact that it provides solutions to destructive consequences of counterproductive work behavior by conflict management styles.

Taking the findings of the study into account, it can be concluded that if a manager or an entrepreneur uses dominating as a conflict management styles to deal with conscious and harmful behaviors of employees, he/she can increase deviance behaviors towards employees. Besides, it is meaningful to benefit from compromising for transforming conflict for the benefit of organization and its members. If organizational deviance occurs, a manager/an entrepreneur should focus on compromising and integrating styles to stop these deviance behaviors. However, it is also clear that it is vain for the managers/entrepreneurs to use obliging and avoiding managing interpersonal or organizational deviance behaviors.

As mentioned before, it is possible to manage organizational deviance by integrating, which is defined as seeking alternative solutions mutually to reach an effective solution (Rahim 2002). Another style, dominating, has increasing effects on interpersonal deviance. If this method is frequently used, it decreases employees' motivation. Even though it is not useful to use permanently, dominating is appropriate for conflicts that need to be resolved quickly (Akova 2015). By compromising, managers/entrepreneurs can deal with both interpersonal and organizational deviances. In the cases of hard-to-reach agreements or when it is aimed to get temporary solutions, compromising is a quite functional tool (Rahim 2002). It converts destructive behaviors for the members of the organization or the organization itself to contributors to the effectiveness of the organization. However, it is invalid to try to use and expect benefit from obliging or avoiding styles.

Eventually, according to difference analysis, integrating is perceived mostly by female participants in comparison with males. Dominating is perceived mostly by private sector employees in comparison with public ones. Younger employees perceive conflict management and its two dimensions, obliging and compromising, more than their elders. Besides, males are in tendency to behave counterproductive work behavior in comparison with females. Counterproductive work behavior and its one-dimensional, organizational deviance are performed less by younger employees and more by employees educated at post-graduate degree.

For further researches, it should be taken into account that Rahim Organizational Conflict Inventory-II (ROCI-II) scale enables to be classified as *concern for others* and *concern for self*. Similarly, a classification for dimensions of Bennett and Robinson's Workplace Deviance scale is available. According to this, interpersonal deviance consists of *political deviance and personal aggression*, and organizational deviance consists of *property deviance and production deviance*.

## References

- Ahmed, K., & Ahmed, G. (2015). The relationships between conflict management styles, job satisfaction and organizational commitment among workers in public and private sectors. *Universal Journal of Psychology*, 3(2), 41–50. <https://doi.org/10.13189/ujp.2015.030203>.
- Akkirman, A. D. (1998). Etkin çatışma yönetimi ve müdahale stratejileri. *Dokuz Eylül Üniversitesi İİBF Dergisi*, 13(2), 1–11.
- Akova, O. (2015). Yonetsel ve örgütsel etkinliği geliştirme yöntemleri. In K. O. Ozer, M. Hiziroglu, & M. Saldamli (Eds.), *Catisma yönetimi* (pp. 516–541). Istanbul: Adra Yayincilik.
- Bennett, R. J., & Robinson, S. L. (2000). Development of a measure of workplace deviance. *Journal of Applied Psychology*, 85(3), 349–360. <https://doi.org/10.1037/0021-9010.85.3.349>.
- Boddy, C. R. (2014). Corporate psychopaths, conflict, employee affective Well-being and counterproductive work behaviour. *Journal of Business Ethics*, 121(1), 107–121. <https://doi.org/10.1007/s10551-013-1688-0>.
- Chan, K. W., Huang, X., & Ng, P. M. (2008). Managers' conflict management styles and employee attitudinal outcomes: The mediating role of trust. *Asia Pacific Journal of Management*, 25(2), 277–295. <https://doi.org/10.1007/s10490-007-9037-4>.

- Chang, L. C., & Zelihic, M. (2013). The study of conflict management among taiwanese adolescents. *Life Science Journal*, *10*(3), 1231–1241.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, *16*(3), 297–334.
- De-Dreu, C. K. W. (1997). Productive conflict: The importance of conflict management and conflict issue. In C. K. W. De-Dreu & E. Van De Vliert (Eds.), *Using conflict in organizations* (pp. 9–52). New Delhi, Thousand oaks, London: SAGE. isbn:0-7619-5091.
- Dirican, A. H. (2013). *Duygusal zekanin orgutsel vatandaslik davranisi ve uretkenlik karsiti davranislar uzerine etkisi*. Master Thesis, Gebze High Technology Institute, Gebze. Institute of Social Science, Turkey
- Durbin, J., & Watson, G. S. (1971). Testing for serial correlation in least squares regression, III. *Biometrika*, *58*(1), 1–19.
- Gokcen-Kapusuz, A., & Cavus, M. F. (2017). Relationship between counterproductive behaviors and islamic work ethics. *European Journal of Business and Management*, *9*(12), 153–156.
- Graham, S. (2009). The effects of different conflict management styles on job satisfaction in rural healthcare settings. *Economics & Business Journal: Inquiries & Perspectives*, *2*(1), 71–85.
- Gümüşeli, A. İ. (1994). *Izmir ilkogretim okullari yoneticilerinin ogretmenler ile aralarındaki catismalari yonetme bicimleri*. PhD Thesis, Ankara University, Ankara. Institute of Social Science, Turkey.
- Kanten, P., Yesiltas, M., & Arslan, R. (2015). Kişiliğin karanlık yönünün üretkenlik karsiti is davranislarina etkisinde psikolojik sozlesmenin duzenleyici rolu. *Ataturk Universitesi IIBF Dergisi*, *29*(2), 365–391.
- Karcioglu, F., & Aliogullari, Z. D. (2012). Catismanin nedenleri ve catisma yonetim tarzları iliskisi. *Ataturk Universitesi IIBF Dergisi*, *26*(3–4), 215–237.
- Karip, E. (1999). *Catisma Yonetimi*. Ankara: PegemA Yayıncılık. isbn:975-6802-03-0.
- Kessler, S. R., Bruursema, K., Rodopman, B., & Spector, P. E. (2013). Leadership, interpersonal conflict, and counterproductive work behavior: An examination of the stressor–strain process. *Negotiation and Conflict Management Research*, *6*(3), 180–190. <https://doi.org/10.1111/ncmr.12009>.
- Kocel, T. (2013). *İsletme yoneticiligi (Yonetim ve organizasyon, organizasyonlarda davranis, klasik-modern-cagdas ve guncel yaklasimlar)*. Istanbul: Beta Yayınevi. isbn: 978-605-377-573-3.
- Meyer, S. (2004). Organizational response to conflict: Future conflict and work outcomes. *Social Work Research*, *28*(3), 183–190.
- Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York, NY: McGraw-Hill.
- O'Brien, R. M. (2007). A caution regarding rules of thumb for variance inflation factors. *Quality and Quantity*, *41*(5), 673–690. <https://doi.org/10.1007/s11135-006-9018-6>.
- Ohbuchi, K. I., & Kitanaka, T. (1991). Effectiveness of power strategies in interpersonal conflict among Japanese students. *The Journal of Social Psychology*, *131*(6), 791–805. <https://doi.org/10.1080/00224545.1991.9924666>.
- Pelled, L. H., Eisenhardt, K. M., & Xin, K. R. (1999). Exploring the black box: An analysis of work group diversity, conflict and performance. *Administrative Science Quarterly*, *44*(1), 1–28.
- Pruitt, D. G., & Carnevale, P. J. (1993). *Negotiation in social conflict*. Europe, Middle East and Africa: Thomson Brooks/Cole Publishing. isbn:0-335-09865-7.
- Rahim, M. A. (2002). Toward a theory of managing organizational conflict. *International Journal of Conflict Management*, *13*(3), 206–235. <https://doi.org/10.1108/eb022874>.
- Rahim, M. A., & Buntzman, G. F. (1989). Supervisory power bases, styles of handling conflict with subordinates, and subordinate compliance and satisfaction. *The Journal of Psychology*, *123*(2), 195–210. <https://doi.org/10.1080/00223980.1989.10542976>.
- Rahim, M. A., & Magner, N. R. (1995). Confirmatory factor analysis of the styles of handling interpersonal conflict: First-order factor model and its invariance across groups. *Journal of Applied Psychology*, *80*(1), 122–132. <https://doi.org/10.1037/0021-9010.80.1.122>.

- Rahim, M. A., Magner, N. R., & Shapiro, D. L. (2000). Do justice perceptions influence styles of handling conflict with supervisors?: What justice perceptions, precisely? *International Journal of Conflict Management*, 11(1), 9–31. <https://doi.org/10.1108/eb022833>.
- Riggio, R. E. (2003). *Introduction to industrial/organizational psychology*. Upper Saddle River, NJ: Prentice Hall. isbn:978-1429242295.
- Robbins, S. P. (1978). “Conflict management” and “conflict resolution” are not synonymous terms. *California Management Review*, 21(2), 67–75. <https://doi.org/10.2307/41164809>.
- Robinson, S. L., & Bennett, R. J. (1995). A typology of deviant workplace behaviors: A multidimensional scaling study. *Academy of Management Journal*, 38(2), 555–572. <https://doi.org/10.2307/256693>.
- Simsek, M. S., Akgemci, T., & Celik, A. (1998). *Davranis bilimlerine giris ve orgutlerde davranis*. Ankara: Nobel Yayin Dagitim. isbn:975-591-034-4.
- Song, X. M., Xie, J., & Dyer, B. (2000). Antecedents and consequences of marketing managers’ conflict-handling behaviors. *Journal of Marketing*, 64(1), 50–66. <https://doi.org/10.1509/jmkg.64.1.50.17989>.
- Sotile, W. M., & Sotile, M. O. (1999). How to shape positive relationships in medical practices and hospitals. (part 1: Conflict management). *Physician Executive*, 25(4), 57–61.
- Spector, P. E., & Fox, S. (2002). An emotion-centered model of voluntary work behavior: Some parallels between counterproductive work behavior and organizational citizenship behavior. *Human Resource Management Review*, 12(2), 269–292. [https://doi.org/10.1016/S1053-4822\(02\)00049-9](https://doi.org/10.1016/S1053-4822(02)00049-9).
- Tjosvold, D., & Chia, L. C. (1989). Conflict between managers and workers: The role of cooperation and competition. *The Journal of Social Psychology*, 129(2), 235–247. <https://doi.org/10.1080/00224545.1989.9711724>.
- Weider-Hatfield, D., & Hatfield, J. D. (1996). Superiors’ conflict management strategies and subordinate outcomes. *Management Communication Quarterly*, 10(2), 189–208. <https://doi.org/10.1177/0893318996010002003>.

**Part II**  
**International Benchmarks and Experiences**

# Human Capital and Entrepreneurial Intentions in Bosnia and Herzegovina

Ramo Palalić, Azra Bičo, Veland Ramadani, and Léo-Paul Dana

**Abstract** Historical phenomenon of human capital is being discussed through centuries. This important pillar in socioeconomic development is necessary to be monitored, analyzed, and debated by every country. So is for Bosnia and Herzegovina. The chapter tries to explain human capital from students' perspective in Bosnia and Herzegovina. The current situation of human capital in Bosnia and Herzegovina is investigated and discussed. Based on the theoretical background, the study explores the main pillars of human capital depicted by an exploratory case study of students population, from the International University of Sarajevo. Several exciting insights were derived from the research, which are elaborated further as the study implications, recommendations, and the future work. Limitations, as well as other study phenomena, are also discussed.

**Keywords** Human capital · Human resource · Migration · Brain drain · Youth · Students · Bosnia and Herzegovina

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## 1 Introduction

The synonym of “human capital” that is being used in the twentieth century is known as “human resources.” Human capital theory was described in detailed by Marx<sup>1</sup> in his works, and it has become the basis for human capital theory for centuries. According to Marx, human capital is not like natural capital, which could be expressed, for example, in equipment and managed as you like. Conversely, while human capital is also very important in any organization, it is very difficult to manage because of its originality; “human beings.”

Marx said that the notion of human capital is used in “bourgeois economics” as a subset of the term capital, which includes “skills, knowledge, trust and effectiveness of employees,” to eventually make profit. He argues that human capital is constituted of the physical strength and intellectual capabilities of human beings. Due to this fact, a human being has the choice to use these assets (physical strength and intellectual power) for the organization or to withhold them as he or she wants. However, the ownership of human capital’s “form” and “values” is managed by a company, which makes decisions regarding its utilization within the company. Marx also points out the difference between human capital and “labor power,” with the latter depicted as the use of almost the same human capacities and measured by the hour. Similarly, he contends that certain knowledge and skill of employees’ activities, such as art, hobbies, interests, sport-skills, etc., are not part of human capital and cannot be used for profit (to be included in the profit measurement).

Smith defines the human capital as “The acquisition of . . . talents during . . . education, study, or apprenticeship, costs a real expense, which is capital in [a] person. Those talents [are] part of his fortune [and] likewise that of society” (Smith 1776). This may partially imply that human capital is very difficult to develop. It takes time and money, and this is why it seems to be costly. Both time and money, in today’s terminology, represent an investment. The HC is not simple, short-term investment, but it is subject to long-term investment portfolio, in which, if not managed properly, will be wasted and a country will be worse off. Well, this waste happens when a nation is not aware of human capital and its importance in socioeconomic development.

Human capital (HC) plays an important role in every society. Its importance was discussed and debated by many sociologists and scientists a few centuries ago. Some of them are Adam Smith and Karl Marx. Both of them had criticized and uphold credentials of human capital, which is now known as human resource (Armstrong 2009). Human resources, in the practice, sometimes have a negative prefix like “costs.” So in the industry when any downs happened, the responsibility goes to the people, and they have been justified as the cost that should be cut. Unfortunately, every financial and economic crises and recession are followed by huge layoffs of employees around the globe.

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<sup>1</sup>Available at <http://www.marxists.org/>.



The study aims to explore views of young people (students) who are subject to *brain-drain* process, especially in developing country like Bosnia and Herzegovina (B&H). Based on the theory, the research provided basic information on the life in the country and migration issues.

The following sections are constituted of theoretical background, followed by methodology, data analysis and results, and concluding remarks with discussion.

## 2 The Theory Background

As every coin has two sides, human capital theory also has its opponents and critiques. Bowles and Gintis (1975) observed the main three areas of the theory's shortcomings in the areas of "demand and supply for human capital by firms and schooling." Also, they came up with additional shortfalls of the Marxian capital theory, which could be seen in "accounting growth distribution and public policy."

Smith (1776) observed human capital as other machinery in a firm, known as fixed capital. He pointed out that the source of human capital is "experience," which reflects its specialization to the related work and "education" that is implementable in educational institutions. However, it illustrates that there is a possibility of "costliness and suboptimal use of human capital," where these two notions are observed in any human development or training under the "apprenticeship system" (Spengler 1977). Hence, human capital is important, and if it is given the opportunity to be developed, the end results should be in parallel with investment in other fixed assets (Smith 1776). However, sometimes there are no remedies against poor performance of human capital.

Human capital plays a very important part in economic development. The literature suggests negligible significance of the relationship between human capital and economic development (Lucas 1988; Romer 1986; Schultz 1961). In recent times, there has been empirical debate on whether the education level of human capital has impact on economic growth (Mankiw et al. 1992). Meanwhile, other empirical evidences have shown that education level and economic growth are not strongly related and its relationship is marked as weak and insignificant (Jess and Spiegel 1994; Islam 1995; Pritchett 2001).

A recent empirical study from China by Zhang and Zhuang (2011) shows that education plays an important role in economic development ("tertiary" education) and the human capital constitution at a regional level affects the economic growth of a country. Since SMEs are drivers for economic development, human capital will inevitably be closely analyzed and examined.

According to Todaro and Smith, basic objectives of human development and vital components of growth and development are education and health, and they are considered to be significant issues of human capital (2009). One of the educational problems is brain drain, which is rendered through global migration of highly educated workers. The implication of Todaro and Smith's (2009) argument is that this migration represents a substantial cost at expense of a home country, which is

especially applicable to engineers, scientists, and physicians. This trend, for instance, has tremendously increased in Bosnia and Herzegovina in last few years.

In every organization it is important to recognize key drivers and use them properly. Even from ancient times, humans have been the basis for any business startups. We believe that the SME structure, if employees are more educated and professionally developed and advanced, has the basis for further growth and development in the market. Accordingly, human capital correctly applied to the SME structure opens the door for creativity and innovation and their further development.

Therefore, we may say that human capital is one of the main pillars in companies and is necessary to be treated correctly by adding essential “additives,” such as professional development in the areas people are involved. By reflection, the company will have a better chance to gain competitive advantage over its competitors and a better position in the market. Human capital consists of intellectual, social, and organizational capital.

## ***2.1 Intellectual Capital***

Intellectual capital results from matching the tangible and intangible resources of human beings. Armstrong (2009, p. 68) defines intellectual capital as “stocks and flows of knowledge” that are on disposal for the use of an organization. These resources provide an output that ultimately results in the business value of that organization. Since human capital is strongly related to intangible resources, we can say that it could be regarded as one of the main factors that create value for an organization, in the short- and long-term perspective, in addition to all necessary financial and tangible or intangible assets (Bontis 1998).

Intellectual capital is mixture of human capital that comprises of knowledge, skills, and experience; structural capital that is a form of a support to human capital through information technologies; and consumer capital that represents an interaction between company and its clients (Sundać and Fatur 2004).

## ***2.2 Social Capital***

According to Putnam (1995), social capital is defined as “features of social organization such as networks, norms and social trust which puts members to undertake necessary steps together to have a common welfare.” This common goal drives a whole society and its members to pursue happiness and welfare for the short and long term in their lives. The term is derived from the network knowledge obtained from social relationships by employees and other structures within an organization (Armstrong 2009, p. 68). In the societal context, we are witnessing that people are gathering into different associations and movements to promote mutual welfares and

economic development and we can assume this happens in industrialized societies, while this action is regarded as very poor in developing countries (Krishna 2002, p. 3). In this work, Krishna (2002, p. 27) throughout its hypotheses points out that social capital really “matters a lot.” This argument is related to what impact its development can have: “strong society, strong economy” or in other words “strong society, strong state” (Krishna 2002, p. 23). This indicates that no country worldwide is able to grow and develop without a strong society that implies a key driver towards a country’s overall prosperity. Despite extensive definitions given by many researchers, the concept of social capital seems to remain “illusive” (Osborne et al. 2007, p. 79). It is not easy to define and give an exact concept and structure of this phenomenon because of its complexity. It is connected and incorporated into many elements of a society which, by acting together, establish synergy for society’s well-being. The most critical attribute of social capital is trust (Sunderland 2007, p. 1). When two or more parties involved enter into a certain transactional relationship, obviously either of them might be at risk, and protection from this risk is trust, such as perceived security in furthering the relationship and the process of accomplishing given goals and objectives. If there is no trust in this transactional relationship of interests, there will be no further communication, nor future prosperity and development. Hence, this case could be applied to the whole society. Sunderland (2007) further elaborates that many historians “overlooked trust” in comparison with “power” as the most important means in society. However, he puts a strong emphasis on trust, which is the key for any further interactions and relationships among people who seek to produce positive results based on mutual interests.

### ***2.3 Organizational Capital***

Organizational capital is defined as institutionalized knowledge within an organization, which is distributed throughout the organization and is documented in soft or hard copy within the organization (Youndt 2000). Edvinsson and Malone (1997) define organizational capital as “structural capital” in an organization (Armstrong 2009, p. 68). Today, organizations strive to develop and broaden this capital by innovation of their products and services, resulting in a new documented knowledge upgraded from that previously held. This means their “structural” or “organizational capital” is advancing, improving, and broadening in all ways from the contribution of intangible human capital or intellectual abilities of employees to apply their knowledge and skills in their day-to-day operations. Every SME tends to have a properly documented archive for all business activities, processes, and operations.

## ***2.4 Human Capital as Human Resource Management***

An organization consists of several departments which function together to make a synergy and, by all means possible, strive to achieve goals and objectives of the organization to attain competitive advantage. The agency that matches employees' expectations of management (in terms of any kind of reward or return of value provided to organizations) with management goals and expectation from employees is the human resource management department. This term entered into the vernacular for the first time in 1972. Before the early 1970s, HRM was known as human capital.

A HRM department takes overall care of several key factors in organizations, including how people are assigned to certain tasks within an organization and what are the end results of its HR management strategy. Overall, a HR strategy contains a business strategy checklist (Eigenhuis and Dijk 2007, p. 11) by which organizational priorities are determined. It plans, recruits, trains, and develops employees to deliver the best possible added value. In very competitive organizations, we perceive the HR department as a key strategic player. It monitors, evaluates, screens, analyzes, and determines what the organization is missing in terms of personnel and what is misaligned in regard to current human capital in that organization.

In today's modern world, HRM is implemented in both the private and public sector (Pinnington et al. 2007, p. 26). This is evidence that HRM plays a vital role regardless of the ownership in organizations. Moreover, a better HR strategy designed towards human capital development will result in organizations that are more competitive and progressive. HRM may have different "managerial styles," and it has always been at the heart of an organization (Pinnington et al. 2007, p. 66). It is integrated in management itself that shapes organizational growth and development through its vision and strategy.

## ***2.5 Human Capital Development in B&H***

A body that collects information related to human capital development is the Global Human Development Organization,<sup>2</sup> which collects over 600 reports across the globe regarding human capital development. This organization opens its website with the words "People are the real wealth of a nation."<sup>3</sup> According to a UNDP report (2013), B&H is among those EU countries where its population lives in rural areas (after Montenegro, Ireland, and Finland), comprising 60% rural residents from the country's whole population. Usually these rural areas are older than urban settlements, but there is a tendency of annual change in migration from rural to urban areas. This is mostly due to the greater availability of jobs in urban areas.

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<sup>2</sup> Available at <http://hdr.undp.org/en>.

<sup>3</sup> Available at <http://hdr.undp.org/en>.

Since urban areas are typically more equipped with opportunities such as education, jobs, commerce, and communication, it is logical that these areas could be far more developed compared with rural ones. However, as far as human development (HD) is concerned in B&H, rural areas have significantly improved in terms of the aforementioned opportunities, and it has been confirmed that rural persons, despite coping with special challenges, are not far behind urbanites (HD Report 2013). Rural persons somehow overcome distance to urban areas and other communication necessities. It is reported that rural persons are in need of the following, “jobs, services and infrastructure” (HD Report 2013, p. 12).

Having the fact that 60% of the B&H population resides in rural areas, its development will comprehensively contribute to human development of the whole country in terms of “health, education, employment, services, life choices” (HD Report 2013), etc.

Human development capital for B&H is measured by the UNDP’s “Human Development Index” (HDI), which is used worldwide. The HDI uses “three axes of human development, *health* (life expectancy at birth), *income* (Gross National Income per capita at purchasing power parity), and *education* (average of the “mean years of schooling” that each adult has actually achieved and the “expected years of schooling” that a child should normally receive)” (HD Report 2013<sup>4</sup>).

According to the HDI, B&H is ranked 81st out of 186 countries, which is within the second quartile and considered as a “Country with high human development” (first quartile belongs to countries with highest HDI) (HD Report 2013). As a potential EU accession candidate by placing in this ranking, life expectancy at birth for B&H is 75.8. The average “years of schooling” are 8.3, while “expected years of schooling” are 13.4. GNI per capita is \$7713 (in 2005), which belongs to the cohort of “upper-middle-income countries” (Keegan and Green 2008, pp. 49–52). As a brief comparison, B&H is the least developed country relating to human development and behind all five ex-Yugoslavian republics: Slovenia, Croatia, Macedonia, Serbia, and Montenegro (HD Report 2013). Also, the UNDP human development report (2011) stated that B&H was in 74th position of its HDI at that time, which has unfortunately fallen back to 81st position (HD Report 2013). Obviously, this is due to political issues that hold the country back in depression and the undeveloped economic landscape of the whole country.

However, Bosnia and Herzegovina have improved its rank (Table 1); the HDI was 0.768, which is 77th since 2013. The best score was Slovenia (0.896, 25th) followed by Croatia (0.838, 46th) and Montenegro (0.814, 50th), while Macedonia (0.757, 80th) is the worst one (HD Report 2017). Nevertheless, this is not the desired level for Bosnia and Herzegovina. Many works should be done to improve both the HDI and HCI.

Finally, B&H, as rural country, has several points to be mentioned due to misbalanced challenges and opportunities in comparison with urban life, which in many ways contribute to human capital development. Firstly, according to the Rural

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<sup>4</sup> Available at <http://hdr.undp.org/>.

**Table 1** Human Development Index (HDI) of ex-Yugoslavia republics, in 2017

Country	Human Development Index (HDI)	HDI rank
Bosnia and Herzegovina	0.768	77
Slovenia	0.896	25
Croatia	0.838	46
Serbia	0.787	67
Montenegro	0.814	50
Macedonia	0.757	80

Source: Human Development Report, 2017, authors' interpretation

Household Survey (2012), there are benefits and shortcoming of rural life. In addition, taking into consideration that there is support from the EU for activities in terms of life expectancy and entrepreneurship learning activities, this reinforces the idea of promoting an entrepreneurial mindset as a key driver of human capital and economic development of the country. Also, these activities should be controlled and revised from time to time.

A big advantage of rural living is that it seems to be better for health, which is achieved through eating healthier food that affects human life. Conversely, all other things such as income, employment, infrastructure, services, education, and social life are deemed to be much better in urban areas. All these aspects affect the development of human capital of this country.

Hence, in the context of B&H, human capital has its essential parallel that is in the lifestyle choice of people. This could be achieved through increasing opportunities for rural residents to remain there or to move to urban areas. Either way should not limit their existence or exacerbate existing problems, rather to develop all necessary things for the rural population (everything that positively affects human capital development) and to let them choose their desired way of life. Then they will be given the opportunity to have potentials suited to them. There might be some cases where some rural residents must move to the city (e.g., in case of work), while conversely some rural residents must remain due to the higher cost of living in urban areas.

Nonetheless, the Rural Household Survey (2012) has proposed to the government of B&H that it should work on all infrastructure and services needed in rural areas and it should not have an exclusive objective to keep rural persons in their areas but provide for every citizen equal opportunities in lifestyle throughout the whole country. Lastly, since B&H is a rural country, it is necessary to change policies in regard to human development, especially in rural areas, at the state level because of a paradox that exist in B&H which is: "while almost half of rural households are involved in some kind of agricultural production, less than 10% generate any cash income from this source" (HD Report 2013).

Therefore, this should be changed as soon as possible. Pursuing low-cost migration will create better opportunities for education and employment, and it will eventually improve economic development across the whole country, resulting in

increased human capital development. As positive examples, this country must look to countries with the highest human capital development.

The following section is a brief case study done among university students. The objective of the case study was to observe students' thoughts and views regarding the human capital in Bosnia and Herzegovina. This population is chosen because they represent the highly skilled population (Todaro and Smith 2009) and youth, this the most expensive asset for every country (Sundać and Fatur 2004), so is for B&H. Besides the general information, the research has emphasized four areas of regular life in B&H. These areas are education, living standards, legal framework, workforce, and employment (World Economic Forum). Additionally, in the end, students were asked their general view on these four areas, for which they provided great insights.

### 3 Methodology

#### 3.1 *The Survey Design*

An online questionnaire was used to collect data on human capital. The questionnaire is designed on the basis of the World Economic Forum (WEF 2014). The design corresponds to definition of the human capital index, which suggests that human capital index is comprised from four main pillars: *health and wellness, education, employment and workforce, enabling environment*. *Health and wellness* are actually can be treated under the umbrella of *living standards*. *Education* in this case includes primary, high school education, and university education with all three cycles. *Employment and workforce* imply employment in a country as well as opportunity to be employed. The *enabling environment* implies legal issues that facilitate businesses and development of entrepreneurship in a country, especially new born startups or new ventures. These are four elements we redesigned in the way of posing questions that portray the HCI components.

The survey was constructed of a total of 30 questions, out of which first 7 are general questions, such as to which faculty students belong to, what is their nationality, and from which canton/city they are. Questions 8–29 were subject to the Likert scale assessment, scaling it from 1 to 7, where *1 is completely disagree, 2 disagree, 3 partially disagree, 4 neutral, 5 partially agree, 6 agree, and 7 completely agree*. The last question was (no. 30) an open-ended question, in which students were given a chance to present their point of view on human capital and provide us with useful comments.

#### 3.2 *Study Population and Sample Size*

The students' population (International University of Sarajevo-IUS, Bosnia and Herzegovina) is taken as relevant one since it is part of youths (Schultz 1961) that

are subject to migration and brain-drain process around the globe, so is in B&H. They were asked to participate in online survey and give their opinion on human capital in Bosnia and Herzegovina. A total number of respondents were 276 students, while the number of respondents of Bosnian nationality was 206. Other students who participated in the survey were residents of following countries: Croatia, Egypt, Ghana, Libya, Montenegro, Palestine, Saudi Arabia, Serbia, Syria, Tanzania, Turkey, and the United States.

In this case study, we analyze responses only of local students. It is because we deal with the topic of human capital issues in Bosnia and Herzegovina and we wanted to get feedback on views of youth on the topic, especially to see their standpoints on this issue of migration and brain drain.

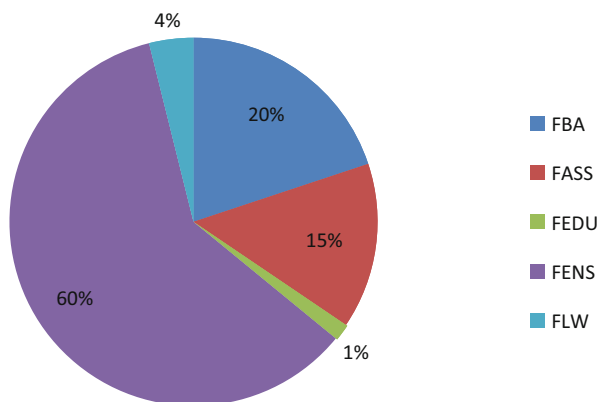
## 4 Findings

Results are presented by descriptive statistics such as bar charts, table, as well as open-ended questions' answers. A 30-question survey was given to students. The core answers on those questions are results of students' views regarding the general life in Bosnia and migration and why youth, such as students, would like to migrate to other countries. The following figures and table will elaborate students' views on human capital's pillars.

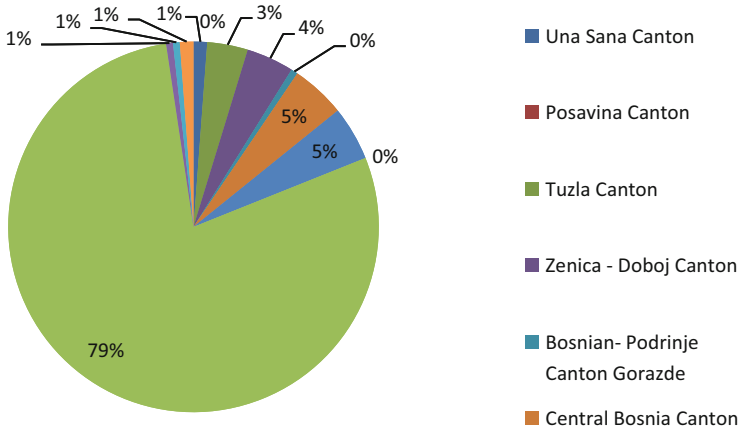
Figure 1 depicts the composition of students according to the faculties of IUS. The IUS is composed of five faculties: FBA (Faculty of Business and Administration), FASS (Faculty of Arts and Social Sciences), FEDU (the Faculty of Education), FENS (Faculty of Engineering and Natural Sciences), and FLW (Faculty of Law). Corresponding percentages show the percentage number of students who participated in our survey, by faculty composition.

Gender distribution of survey participant was equal; 50% participants were male, and 50% were of the female gender. The 95% of our participants were undergraduate

**Fig. 1** Student survey participants' distribution according to IUS faculties







**Fig. 2** Student survey participants’ distribution according to IUS faculties

students, 4% were master’s students, and only 1% were doctoral students. Figure 2 shows the distribution of survey participants according to cantons where they reside. Most of the students are from the Sarajevo Canton, which is the biggest populated area in Bosnia and Herzegovina (Fig. 2).

Among the questions that students were asked, we have highlighted the once are of the most concern. These questions are related to *education, employment opportunities, legal framework infrastructure, and living standards*. Results of these questions that the survey has revealed are interesting insights, which together comprise and, at the same time, affect the development of human capital. For instance, Table 2 shows the very exciting findings regarding questions of the HC’s pillars and student’s decision whether they would or would not migrate to another country, due to different motives.

Results are as follows. The 32.04% of students partially agree that *life is joyful in Bosnia and Herzegovina*. Taken this into account, they also believe that *current salaries* are not enough to live it up, where 64.08% of answers are distributed among 1–3 scale (disagree prefixed scaled responses). Students do not believe in *education* quality being at the same or almost the same level as in the EU (Table 2).

Regarding the survey statement: “University education in this country is good enough so that graduates can perfectly serve a regional or global labor market?” 25.73% students partially agree with this statement, while 8.74% disagree. The most critical finding in this survey is related to the question: “If I would migrate to another country, it will be because of low living standards.” It is because Bosnia and Herzegovina have already tackled problems of major brain drain. Students’ answers on this question were 18.45% partially agree, 21.36% agrees, and 29.61% completely agrees. The total is 69.42% of youth who consider to migrate to other countries. As the final finding, we can conclude that students (*our future highly skilled labor force*) recognize the lack of *living standards as well as the support* for the right business conditions for young entrepreneurs.

**Table 2** Results of selected questions on human capital in B&H survey

Question/Likert scale 1–7	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	6 (%)	7 (%)
Life in Bosnia and Herzegovina is truly joyful	3.40	9.71	10.68	19.42	32.04	13.59	11.17
Current salaries in this country are enough to live it up	18.93	22.82	22.33	22.33	7.77	4.85	0.97
Living standards in this country are very acceptable	12.62	19.90	22.33	21.36	14.56	6.80	2.43
Education in this country is quite good, almost the same as in the EU	14.08	16.99	22.33	19.90	10.19	12.62	3.88
University education in this country is good enough so that graduates can perfectly serve a regional or global labor market	3.88	8.74	16.99	26.70	25.73	10.19	7.77
I believe that this country somehow appreciates the talents of a workforce in many different ways	18.45	25.24	18.93	14.08	15.53	4.37	3.40
If I were given an opportunity to go abroad for higher education, I would accept it	1.94	4.37	5.83	9.22	14.56	22.82	41.26
If I would migrate to another country, it will be because of the low level of education	18.45	15.53	20.87	19.42	9.71	7.77	8.25
If I would migrate to another country, it will be because of low living standards	4.85	7.28	8.74	9.71	18.45	21.36	29.61
If I would migrate to another country, it will be because of no job security	3.40	6.31	9.22	17.48	18.93	22.82	21.84
The legal framework in this country is so comprehensive that it provides quite good business conditions for young entrepreneurs	11.17	17.96	24.27	32.52	11.65	1.46	0.97

Students' responses to the questions, "I believe that this country somehow appreciates the talents of a workforce in many different ways," were in total 62.62% partially disagree, disagree, and completely disagree. It is majority who think regardless of a talent, local companies are not ready to embrace creative young, fresh graduates to give them chance to add values.

Similarly, for the question: "If I was given an opportunity to go abroad for higher education, I would accept it," they responded as majority of 78.64% (partially agree and completely agree) will take this chance to educate themselves abroad. This is very intriguing since they said that education is good for the time being. However, it seems that if they have that chance and miss it, it will be opportunity cost for them. Consequently, most of them would take chance for abroad education if it comes.

Besides the numerical expression of students regarding asked questions, it is given a chance to students to describe their thought on human capital in Bosnia and Herzegovina. Students' statements on human capital are as a final remark to this case

study. There are ten highlighted students' points of view on the last question: "In overall, are you satisfied with the current situation of education, employment, living standards, and legislation? What can you say as your final words on this topic?"<sup>5</sup>

**Student A:** "Companies in Bosnia do not want to hire students for a part-time job, and it is with a reason. At least in Sarajevo, there is no student service for the jobs that are made by the State or the universities, so contracts have no legal background. This keeps many students from having more work experience."

This may imply that the academia and the industry are not well connected. It should be found what causes this disconnection? Students should be ready for after graduation challenges, and the industry does not pay attention. On the other hand, universities do not care either.

**Student B:** "Education in our country is good but should be improved. Today's living standards are very low, and I am not sure if I will stay in Bosnia to build my future."

This observation leads to conclusion of this view that students are somehow satisfied with education, which is still subject to more advancements. Living standards obviously are the key of staying in this country to build their future, which are for now very low.

**Student C:** "Overall, in deeply dissatisfied with this country's education, employment, living standards, and legislation. With new legislative measures, if we ensured a more educated society, the rest would progress as well. The country needs a rebirth in education and vocational advancement."

This thought is negative concerning the human capital. All pillars are in jeopardy and shall be rescued as soon as possible. Legislation along with education builds up the society. Otherwise, these two could cause the quicker brain-drain process, which is already in B&H.

**Student D:** "Given the situation in country's comprehensive administrative apparatus, huge bureaucracies and inefficient management, constant political turmoil as a result of constitution etc. does not provide a hope for a perspective future if no structured change is going to take place soon. Trend of 'brain drain' will just continue to flourish, what no one wants."

The above observation and view are clear-cut that the brain drain already exists. The current political, economic, legal, and other factors enormously contribute to this process. A transformational change in the society is required to help the country to stop the brain-drain process and to develop in the near future.

**Student E:** "I am satisfied with education. But it does not mean that I am satisfied with employment, living standards and legislation. They should work more on employment, improve living standards and legislation."

The pillars shall be improved all four. Education is still considered as a bit better compared to other components that constitute human capital.

**Student F:** "I am satisfied with any above. The situation could be better if entrepreneurs were given better chances. Paperwork in our country is such a long

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<sup>5</sup>It should be noted that this question is anonymously answered.

process that pushes entrepreneurs away. The situation is not satisfying. People are not motivated and it seems like the country is not working to fix it.”

As opposite of previous one, this shows that a few of them may think differently. From this statement, it is obvious that this student has a kind of entrepreneurial mindset. In that sense, no situation is bad but could be a great opportunity. The government is the basis to improve some of these pillars. Actually, this view implies that there are still people that are ready to develop the country, but the basis must be postulated by the state.

**Student G:** “I am not satisfied with the current situation especially when it’s about the position of young people ... because there is no opportunity for self-improvement.”

As a young person, the student above does care about the youth’s future perspective. Such desperate view cannot be changed unless the current situation is changed. Otherwise, youth will look forward to settle somewhere else other than B&H.

**Student H:** “Overall, I’m not satisfied with any of these points, but what I’m most annoyed about are the general living standards in this country. For now, it seems like it will not get any better and that is the greatest frustration.”

All pillars of human capital must be satisfied in order to attract young people to live their future in B&H.

**Student I:** “I really don’t want to become average as everyone here have that satisfy themselves with whatever is given here. I think I deserve more and that is why I would leave this country mainly.” This shows another frustrating view based on the facts that this country does not really care about young generations. The policy makers along with other decision-makers must understand that the bell alarm has announced migration waves a long time ago.

**Student J:** “If you want to live 10x better life, you have to work 10x harder, no matter which country.” Nonetheless, there are some young people that see the life as devotion to the life in every sense. This signifies that, considering all constraints and factors which create a situation in a country, everybody must putt effort to create its life better. How much you devote for your betterment that much will be deserved. Actually, this entails that everyone can be happy if an effort is put in right things and every time and space are good ones. The point is only how someone will use those constraints and factors.

## 5 Discussion and Concluding Remarks

Human capital is an essential asset in every organization. If we analyze any organization, we will realize that human capital has enormous ongoing costs compared with fixed or other assets. No other physical asset can perform without humans applying their expertise and skills that are needed in daily operations, as well as in managerial decision-making. Being constituted of three main parts, intellectual,

societal, and organizational capital, human capital plays an important role in economic and human development in general. It has a twofold relationship: with entrepreneurship development and economic growth (Baptista and Leitão 2015), which in both cases can be reflected in the society's welfare.

Consequently, to be appropriately managed to provide the best possible outcomes for organizations and the society, human capital must be adequately measured. There are several ways on how to measure it from organizational perspective and what may be included as measuring elements: total rewards and accountability, collegiality, flexible workforce, recruiting excellence, and communication integrity (Watson 2002); people, work processes, management structure, information and knowledge, decision-making, and rewards (Guzzo et al. 1994); and employment cost  $\times$  individual asset = human asset worth (Mayo 2001). In modern time, human resource management, known as HRM, plays an integral part of management in any organization. It is present in both private- and state-owned organizations and is always a crucial segment of an organization's management styles (Pinnington et al. 2007, p. 66).

Skilled human capital was always in focus for successful organizations. They tried to get best human resources as inputs to achieve best outputs. Demographic shift nowadays helps them to get best human capital around the globe, through migration of people, from one region to another.

Human resources or human capital from the Western Balkan was always an attractive source of import of hardworking and dedicated youth and middle-aged people. In the early 1960s and 1970s, people were migrating from these areas to the Western Europe constantly (Vracic 2018). In case of B&H, this emigration was mainly for the job purposes. Such emigration is being always justified by the government, with remittances value that diaspora provide to their families, relatives, and friends. From the economic point of view, it is very much cherished source of income.

Unemployment is one of the current issues in the Western Balkan (Svetlik et al. 2010). A high unemployment rate causes emigration from this region to mainly Western Europe. Bosnia and Herzegovina are witnessing a huge emigration of people who are looking for a better life.

In the context of this study, we have to note that B&H is mostly rural, notwithstanding the significant opportunity to develop and educate people more about "entrepreneurial leadership,"<sup>6</sup> Increasing awareness of entrepreneurial leadership among the rural population could stimulate more of the people to be involved in business startups and creating new jobs. To increase the consciousness of young people in rural areas, the state government should support rural development and be engaged fully in the development of the entrepreneurial leadership process in these areas.

Additionally, B&H has retraced its HDI position from 74 in 2011 to 81 in 2013 (UNDP Report 2013), and going back again to 77th place in 2017 is still not

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<sup>6</sup>It is meant for education to develop an entrepreneurial mindset of people.

promising. The situation is not better than it was in 2011 (74th rank). Also, the paradox exists that B&H is mostly a rural country, while only 10% of its revenue is generated from agricultural activities (HD Report 2013). Therefore, there is an urgent need for the state government to improve the current situation.

The study has shown the tendency of young people to think of emigration as the alternative of the currently joyful life in Bosnia. The work has explored main reasons why young people are leaving the country. These are the current living standards, employment opportunities (unemployment), salaries, legal system, and education. According to World Economic Forum, these are the main pillars of human capital index. Regarding the ranking of B&H, it is still in a very bad position (77th, Table 1) among ex-Yugoslavia republics.

The youth students (the study sample) are excited about the life in Bosnia in which they can enjoy. Most of them think that the life in this country is joyful. Conversely, they think that current salary is not enough that would make their life joyous. Besides salaries, the current living standards are not promising, which youth consider very important for their current and future life. Regarding the education, they mostly think that it is not like in the EU but enough (university education) of being employable in the local market. Certainly, most of them confirmed that they will not migrate because of education but they will do so due to low salaries, job security, as well as living standards in general. Moreover, they think that talents are not really appreciated in this country, giving additional reason for emigrate from the country. Additionally, the legal system does not ensure that those with entrepreneurial mindset are truly welcome to create new enterprises with jobs and contribute to the socioeconomic development of the country. This study confirms previous studies (Palalić 2017; Palalić et al. 2017; Palalić and Bičo 2018) that have shown weakness, if not *laggardness*, of the B&H's government in creating a better entrepreneurial environment, in which youth at first place will find the future, lighthearted life. Nonetheless, the state should bear in mind that this population is crucial in creating the social capital, which should be wisely used (Light and Dana 2013) for the development of the country. Additionally, Bosnia is not a usual country but very specific in terms of entrepreneurship ecosystem (Dana 1999), and, thus, the government should play the main role in advancing that ecosystem.

The highlights of this work justify arguments of Vracic (2018) that this region of B&H is a valuable pool of good human capital. The reason is the atmosphere which is reflection of a very complex state structure (3 presidents, over 10 governments, cantonal entity, and districts; over 130 ministries) which consumes a lot of energy of people of this country. Ramadani and Schneider (2013), as well as Ramadani and Dana (2013), noted that there has been a considerable economic growth between 2001 and 2010. However, it should be noted that as important as economic growth, the migration or shift of the Bosnian human capital is also important. The economic growth of B&H will not be sustainable in the future if the human capital is not any more available as needed. The trends in Bosnia show that people are emigrating from the country (Vracic 2018). The human capital in Bosnia, regardless how it is defined (Osborne et al. 2007), whether it is intellectual capital (Sundać and Fatur 2004),

social capital (Putnam 1995), or organizational capital (Edvinsson and Malone 1997; Youndt 2000), is imperative to keep it for the society's future. For now, human capital of Bosnia and Herzegovina, and even of the whole Western Balkan, is the future for the developed countries, like the EU at the first place and the brain drain for Bosnia and the rest of the Balkan countries.

## 5.1 Contribution of the Study

The primary contribution of the research is the extension of the currently wide literature on human capital (Baptista and Leitão 2015), which treats the intellectual capital (Sundać and Fatur 2004); future organizational capital, like students' population (Edvinsson and Malone 1997; Youndt 2000); and social capital as explained by Putnam (1995). As the primary research, it brings the flesh to the research literature related to ex-Yugoslavia region. Moreover, it opens doors for the future works in this research field and in this region. Similarly, from some other perspectives, it adds values on trends that are happening to developing countries, particularly the Western Balkan, as a worthwhile pool of human resources for developed countries.

## 5.2 Practical Implications with Recommendation

This exploratory study has revealed important signals for the B&H government what they must be done. Although young people like to live in Bosnia, however, they are forced to think of emigration to countries where they will replace the Bosnian joyful life instead. In this regard, there should be given recommendations to policy makers and educators to respond to this trend of emigration of Bosnian human capital to other countries.

*Policy and decision-makers* should hardly work on policies that will prevent young people to willingly stay in B&H. Perhaps, they can establish a legal framework that will ensure an entrepreneurial spirit to freely flow across the country. It will positively affect the economic growth and entrepreneurship development (Baptista and Leitão 2015), by creating new jobs and improving and advancing living standards for all citizens. This will not only prevent brain drain from the country, but also it will change people's view on the general life in the country.

*Educators* shall give the best to hone youth's (students) knowledge, skills, and competence so that it will be the synergy, which will yield in future well-prepared entrepreneurial mindset. This mindset should serve the society and provide welfare to all.

### 5.3 *Limitations*

Limitations of this research are a few. Firstly, the population could involve other young people together with students. It could be young newly graduated students who are employed as the first job. In addition, it would be great to hear from the young people who are registered at the employment agencies. So having three segments of study, it would give a better picture on this topic. Finally, deep statistical analysis could be done to inspect the causes of migration and/or the joyful life in B&H.

### 5.4 *Future Work*

The future work can be derived from the study limitations. If included two more demographic segments (freshly employed and unemployed-registered at agencies of employment) it would give more strength to the future research. In addition, interviews can be done to have more in-depth meaning of human capital perspective in B&H. Lastly, policy makers can be involved in interviews to avoid any further bias concerning strategic moves of the government. In addition, business owners should be involved because of human capital status in B&H.

## References

- Armstrong, M. (2009). *Armstrong's handbook of human resource management practice* (11th ed.). London and Philadelphia: Kogan Page.
- Baptista, R., & Leitão, J. (2015). *Entrepreneurship, human capital, and regional development: labor networks, knowledge flows, and industry growth*. Cham: Springer.
- Bontis, N. (1998). Intellectual capital: An exploratory study that develops measures and models. *Management Decision*, 36(2), 63–76.
- Bowles, S., & Gintis, H. (1975). The problem with human capital theory: a Marxian critique. *The American Economic Review*, 65(2), 74–82.
- Dana, L. P. (1999). Business and entrepreneurship in Bosnia and Herzegovina. *Journal of Business & Entrepreneurship*, 11(2), 105–117.
- Edvinsson, L., & Malone, M. S. (1997). *Intellectual capital: realizing your company's true value by finding its hidden brainpower*. New York: Harper Business.
- Eigenhuis, A., & Dijk, R. V. (2007). *High performance business strategy: Inspiring success through effective human resource management*. London: Kogan Page.
- Guzzo, R. A., Noonan, K. A., & Elron, E. (1994). Expatriate managers and the psychological contract. *Journal of Applied Psychology*, 79, 617–626.
- Islam, N. (1995). Growth empirics: A panel data approach. *The Quarterly Journal of Economics*, 110(4), 1127–1170.
- Jess, B., & Spiegel, M. M. (1994). The role of human capital in economic development evidence from aggregate cross-country data. *Journal of Monetary Economics*, 34(2), 143–173.
- Keegan, W. J., & Green, M. C. (2008). *Global marketing* (5th ed.). London: Pearson Prentice Hall.



- Krishna, A. (2002). *Active social capital tracing the roots of development and democracy*. New York: Columbia University Press.
- Light, I., & Dana, L.-P. (2013). Boundaries of social capital in entrepreneurship. *Entrepreneurship Theory and Practice*, 37(3), 603–624.
- Lucas, R. E. J. (1988). On the mechanics of economic development. *Journal of Monetary Economics*, 22(1), 3–42.
- Mankiw, N. G., Romer, D., & Weil, D. N. (1992). A contribution to the empirics of economic growth. *Quarterly Journal of Economics*, 107(2), 407–437.
- Mayo, A. (2001). *The human value of the enterprise: Valuing people as assets*. London: Nicholas Brealey.
- Osborne, M., Sankey, K. K., & Wilson, B. (2007). *Social capital, lifelong learning and the management of place, an international perspective*. London: Routledge.
- Palalić, R. (2017). The phenomenon of entrepreneurial leadership in gazelles and mice: A qualitative study from Bosnia and Herzegovina. *World Review of Entrepreneurship, Management and Sustainable Development*, 13(2/3), 211–236.
- Palalić, R., & Bičo, A. (2018). Entrepreneurship in Bosnia and Herzegovina. In R. Palalić, L. P. Dana, & V. Ramadani (Eds.), *Entrepreneurship in former Yugoslavia: Diversity, institutional constraints and prospects*. Heidelberg: Springer.
- Palalić, R., Ramadani, V., & Dana, L. P. (2017). Entrepreneurship in Bosnia and Herzegovina: Focus on gender. *European Business Review*, 29(4), 476–496.
- Pinnington, A., Macklin, R., & Campbell, T. (2007). *Human resource management: Ethics and employment*. Oxford: Oxford University Press.
- Pritchett, L. (2001). Where has all the education gone? *The World Bank Economic Review*, 15(3), 367–391.
- Putnam, R. D. (1995). Tuning in, tuning out: The strange disappearance of social capital in America. *Political Science and Politics*, 28(4), 664–683.
- Ramadani, V., & Dana, L. P. (2013). The state of entrepreneurship in the Balkans: Evidence from selected countries. In V. Ramadani & R. Schneider (Eds.), *Entrepreneurship in the Balkans* (pp. 217–250). Berlin: Springer.
- Ramadani, V., & Schneider, R. (2013). *Entrepreneurship in the Balkans*. Cham: Springer.
- Romer, P. (1986). Increasing returns and long-run growth. *The Journal of Political Economy*, 94(5), 1002–1037.
- Schultz, T. (1961). Investment in human capital. *The American Economic Review*, 51(1), 1–17.
- Smith, A. (1776). *Wealth of nations*. Scotland, Kingdom of Great Britain: William Strahan and Thomas Cadell.
- Spengler, J. J. (1977). Adam Smith on human capital. *The American Economic Review*, 67(1), 32–36.
- Sundać, D., & Fatur, I. (2004). Cimbenik stvaranja konkurentskih prednosti i logističkog poduzeca. *Ekonomski Pregled*, 55(1/2), 85–96.
- Sunderland, D. (2007). *Social capital, trust and the industrial revolution: 1780–1880*. London: Routledge.
- Svetlik, I., Barisisc, A. F., Kohont, A., Petković, M., Mirić, A. A., Slavić, A., Vaupot, Z., & Poór, J. (2010). Human resource management in the countries of former Yugoslavia. *Review of International Comparative Management*, 11(5), 807–833.
- Todaro, M. P., & Smith, S. C. (2009). *Economic development*. London: Addison-Wesley.
- Vracic, A. (2018). *The way back: Brain drain and prosperity in the western Balkans, May 2018 – ECFR/257*.
- Watson, W. W. (2002). *Human capital index: Human capital as a lead indicator of shareholder value*. Washington DC: Watson Wyatt Worldwide.
- Youndt, M. A. (2000). Human resource considerations and value creation: the mediating role of intellectual capital. In *National conference of US academy of management*, Toronto, August.
- Zhang, C., & Zhuang, L. (2011). The composition of human capital and economic growth: Evidence from China using dynamic panel data analysis. *China Economic Review*, 22(1), 165–171.

## Websites

- HD Report. (2013). Accessed Nov 19, 2018, from <http://hdr.undp.org/en/2013-report>
- HD Report. (2017). Accessed Nov 19, 2018, from <http://hdr.undp.org/en/composite/HDI>
- Rural Household Survey. (2012). Retrieved Jan 4, 2019, from [http://www.ba.undp.org/content/dam/bosnia\\_and\\_herzegovina/docs/Research&Publications/NHDR/2013/Annex%205%20-%20Rural%20Household%20Survey%20-%20Analysis%20and%20Data.pdf](http://www.ba.undp.org/content/dam/bosnia_and_herzegovina/docs/Research&Publications/NHDR/2013/Annex%205%20-%20Rural%20Household%20Survey%20-%20Analysis%20and%20Data.pdf).
- The World Economic Forum. (2014). Retrieved Jan 4, 2019, from <https://www.weforum.org>.
- UNDP. (2011). *Human development report*. Retrieved Jan 4, 2019, from <http://hdr.undp.org/en/content/human-development-report-2011>.
- UNDP. (2013). *Human development report*. Retrieved Jan 4, 2019, from [http://hdr.undp.org/sites/default/files/reports/14/hdr2013\\_en\\_complete.pdf](http://hdr.undp.org/sites/default/files/reports/14/hdr2013_en_complete.pdf).

# Education, Gender, and Entrepreneurial Intention: The Case of Mexico

Lizette Huezo-Ponce and José Manuel Saiz-Álvarez

**Abstract** The objective of this chapter is to study how quality education influences entrepreneurial intention and to achieve sustainable human capital management. *Methodology:* We apply an ANOVA and the Levene's test of homogeneity of variances in a sample composed of 1025 students from the 6 main faculty departments of Tecnológico de Monterrey in Guadalajara, Mexico, to study how gender, the level of studies, and parents' schooling determine the entrepreneurial intention of students. *Findings:* (1) The type of studies chosen by studies affect to their entrepreneurial intention; (2) for the sample analyzed, women have a similar entrepreneurial intention than men, so gender is not a crucial factor for entrepreneurial intention; and (3) parents' occupation and their higher level of studies positively determine the entrepreneurial intention on their children and allow reaching a sustainable human capital management.

**Keywords** Education · Sustainability · Management · Gender · Capital · Entrepreneurial intention · Study

## 1 Introduction

Sustainable human capital management (HCM) is an emerging research theme (Kimbu et al. 2018). In this chapter, we connect HCM with education, as acquiring good educational standards guided by excellence is crucial for future success in both managing a firm and human capital (Arman 2017). According to Matherly and Al Nahyan (2015), two strategic enablers optimize HCM: first, senior entrepreneurship

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as a tool for promoting transparency and fostering a culture of trust among stakeholders and, second, knowledge management because it impulses corporate growth with the setting of economic incentives to benefit the human resources of the firm.

These enablers are reinforced with the introduction of environmental-related issues, as the combination of collaborative networks and green skills (Hasan et al. 2017) related to environmental protection affects HCM positively (Kimbu et al. 2018), while supporting entrepreneurship increases GDP (gross domestic product) growth, especially when social entrepreneurship is impulsed in developing countries and intrapreneurship in nations endowed with highly educated population.

Education has a direct role in fostering economic development, and this fact is crucial in developing countries. In this sense, educational initiatives rooted in e-learning and blended learning (b-learning) are important to educate people located in remote and distant areas. As a result, lifelong learning (LLL)-related practices increase competitiveness (Pisal et al. 2015) and efficiency in firms, which is crucial for corporations competing in “glocalized” markets and for nations to grow.

Previous literature on this topic has highlighted the lack of research on the relationship between gender and entrepreneurial intention (EI) (Davidsson 1995; Yordanova and Tarrazon 2010) and career expectations in adults when their intentions begin to be formed in their adolescent stage (Low et al. 2005; Wilson et al. 2007). This is why our study focuses on variables related to family space and gender by following the suggestions made by Sonnenfelt and Kotter (1982). Likewise, some intention models have been used, which have proven useful in understanding startups creation and offer a coherent, highly generalizable, and robust theoretical framework to understand and predict the entrepreneurial activity from an interactionist perspective between entrepreneurs and stakeholders (Krueger et al. 2000).

The objective of this chapter is to analyze how the educational level achieved in a country optimizes HCM and positively influences on EI. An optimization process directly linked to educational quality, values, and entrepreneurship. We will analyze this relationship in the next section.

## **2 Quality, Entrepreneurial Intention, and Value in Education**

### ***2.1 The Asset of Education as a Value***

Latin America is a region that suffers from insufficient and unequal access to education, which means that only 30% of the students from the poorest quintile, and also 30% of the students living in rural areas, complete their primary education. This situation contrasts with students from richer families, where 83% of them belonging to the richest quintile, and 60% living in urban areas, complete secondary education (Eide and Rösler 2015).



**Fig. 1** Main gaps in developing countries. Source: Authors

As a result, only 12% of the Latin American workforce reaches higher education, well below the average (24%) of the OECD (Organization for Economic Cooperation and Development). Also, the percentage of young people who enroll in science and technology is particularly low, contrary to social sciences and humanities where the percentage of students is much higher. This low concentration in technical studies does incentivize the creation of industrial processes, which does impulse economic growth.

The distribution of students differs in most of the OECD countries, where there is a bigger concentration in developed countries of scholars in engineering, science, and technology-related studies. Moreover, students entering tertiary education overwhelmingly choose social sciences, business, and law as their fields of education in all countries, except Finland and Korea. Besides, international students prefer social sciences, business, and law programs, and students in eastern European countries, Belgium, Italy, and Spain tend to prefer health programs (OECD 2018).

As a result, sustainable human capital management (HCM) is crucial for business success.

Opposite to the threefold gaps existing in Latin America in education, innovation, and society (Fig. 1), sustainable HCM can be defined as the set of business-related strategies focused on achieving the “triple bottom line of sustainability,” by seeking to simultaneously create economic, ecological, and social value to ensure sustainability (Slaper and Hall 2011). As a result, when this triple equilibrium is achieved, nations will achieve higher levels of GDP growth and economic development and the increase in social welfare. These achievements, however, can vanish if young generations abandon their studies, especially when it occurs in primary and secondary levels.

This fact has led to school dropout by 29% of young people between 16 and 19 years of age, which is significantly affecting the skills learned by the workforce in Latin America. This high dropout rate produces two negative effects. First, a large number of those who leave the educational system do not obtain the necessary knowledge and skills to be employed in more sophisticated and high added value industries. Second, as one of the main reasons for school dropout is the need to find work for subsistence, young and low-educated people join the labor market with low-skilled jobs and reduced wages. This fact creates a vicious socio-educational circle that further impoverishes these people who continue belonging to low-income households (Eide and Rösler 2015), so the innovation gap continues in Latin America, as shown in Fig. 1.

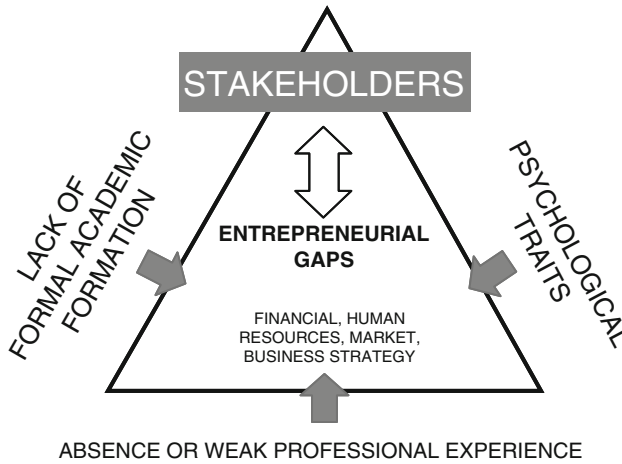
## 2.2 *The Quality of Education*

Latin America is below the average of the OECD and other developed countries concerning the quality of education (primary, secondary, and tertiary) which causes a threefold gap, as shown in Fig. 1. Results show a bad overall performance, identifying a greater gap between the quality of mathematics and science education. Every Latin American country scores lower than the average of the high-income OECD countries, mainly on the quality of their mathematics and science-related education. Costa Rica is the only country in Latin America with a score above the OECD average in the quality of the education system and the degree of staff training, while Chile and Costa Rica report a score higher than the OECD average in the quality of their business schools.

Educational quality is also measured as the positive difference in wages offered to high-educated workers. While the relationship between education and wage was direct and positive during the 1990 decade, in the next decade, the wage gap between educated and non-educated workers has decreased. This reduction is mainly caused by the following: (1) the supply of workers with higher education has exceeded the labor demand; therefore, there is a reduction in the value of tertiary education, and (2) working skills obtained by workers are different from what employers need (Eide and Rösler 2015).

As shown in Fig. 2, entrepreneurial ecosystems are affected by the 5G or the five gaps (finance gap, market gap, physical capital gap, policy gap, and talent gap). Only when these gaps disappear, nations will be prepared to achieve sustainable HCM by fostering EI.

Latin America is very different when it comes to training its human resources. At this respect, Maldonado-Maldonado (2002) ranked countries concerning their HEI based on the number of research centers, specialists, professional associations, journals, government agencies, and networks of experts. Differences in research related to different social and economic impacts occurred in the region, HEIs, and the entrepreneurial ecosystem of the country given by entrepreneurial gaps that are affected by a lack of formal academic formation and weak professional experience,



**Fig. 2** Entrepreneurial gaps and factors affecting entrepreneurship. Source: Authors

as defined in Fig. 2. At this respect, Maldonado-Maldonado (2002) distinguish four groups of nations in Latin America and the Caribbean: (1) Argentina, Brazil, Chile, and Mexico endowed with strong HEIs; (2) Colombia, Venezuela, and Cuba, whose research systems must be consolidated; (3) Bolivia, Costa Rica, Ecuador, and Peru with a research in an early stage of development; and (4) Central America, Uruguay, Venezuela, Dominican Republic, Paraguay, and the rest of the Caribbean islands (except Cuba) with a very weak research system.

Better linked quality-based HEIs to their ecosystems will maximize their impact in the nation. As Mexico is an efficiency-based economy from an entrepreneurial perspective (Naranjo et al. 2015), entrepreneurship is reinforced with the organization of some entrepreneurial-based associations, such as CLADEA (Latin American Council of Management Schools), National Association of Universities and Higher Education Institutions (ANUIES), Latin American Network of Universities for Social Entrepreneurship, RedEmprendia, Ashoka (Changemaker Campus, Ashoka U Commons, and Ashoka U Exchange), business incubators and accelerators, scientific and technological parks, and entrepreneurship education. The conjunction of these organizations incentivizes the creation and strengthening of EI in the country (Alexei and Kolvereid 1999; Audet 2002; Crant 1996; Douglas and Shepherd 2002; Krueger et al. 2000). The EI, as the dependent variable, is the best predictor for behavior (Ajzen 1991; Liñán et al. 2005). We will analyze the EI in the next section.

### 3 Gender and Entrepreneurial Intention

The study of entrepreneurial behavior is defined by being a field of plural and multidisciplinary research, which studies personal characteristics and business activities, economic and social effects, and even cultural aspects. Research in Psychology has been centered mainly in the analysis of the individual differences between entrepreneurs and non-entrepreneurs to elaborate a descriptive profile of the typical personality of the entrepreneur to detect people with the innate potential to become a successful entrepreneur. However, this line of research has poor results, both methodological and theoretical, which have revealed the inadequacy of the personality trait to predict entrepreneurial behavior (Gartner 1988; Robinson et al. 1991; Shaver and Scott 1991; Shane and Venkataraman 2000; Baron 2002).

This fact has led many researchers in this area to study more dynamic variables and models that take into account personal and social aspects, and the interaction between both, to explain and predict entrepreneurial behavior. Consequently, the line of research that is having the greatest relevance is the study of EI (Liñan and Fayolle 2015; Alexei and Kolvereid 1999; Audet 2002; Crant 1996; Douglas and Shepherd 2002; Krueger et al. 2000). This approach is based mainly on the analysis of the choice of occupational career, that is, why some people but not others choose to develop their professional career through self-employment. The EI, as a dependent variable, is the simplest predictor of behavior (Ajzen 1991; Liñan et al. 2011) towards entrepreneurship, which we will define as the discovery, evaluation, and exploitation of an opportunity (Shane and Venkataraman 2000). These ideas are especially important in the model of the Theory of Planned Behavior (Liñán et al. 2005).

This book chapter aims to expand the study of the entrepreneurial profile using variables born from Social Psychology to explain and predict the intention of developing a professional career through self-employment. To fulfill this objective, we use the development model of the professional career settled by Sonnenfelt and Kotter (1982) that has also been used by Sánchez-Almagro (2003). This model classifies all the psychosocial variables affecting an entrepreneur in three spaces: family, socio-labor, and personal; although we focus on the family space only, the age and gender are included. The sample used in this study is limited to university students, so participants are young and the variability in age is very low. As a result, we cannot analyze the variable age to study EI.

Regarding gender, the role of women plays a substantial role in entrepreneurship worldwide (Wilson et al. 2007), and data have been found to suggest large gaps in average-income nations where men are 75% more likely than women to be active entrepreneurs, compared to 33% in high-income countries and 41% in low-income countries (Minniti et al. 2005; Wilson et al. 2007). At this respect, Wang and Wong (2004) find that the effect of gender on entrepreneurship is partially mediated by the lack of entrepreneurial knowledge (Yordanova and Tarrazon 2010). Besides, research on career interest in adolescents has revealed less interest in women related



to men in the choice of entrepreneurship-based careers (Kourilsky and Walstad 1998; Marlino and Wilson 2003; Wilson et al. 2007).

Research in entrepreneurship has repeatedly pointed out that the social models provided by the family environment positively influence on the development of professional career through self-employment (Brockhaus 1982; Shapero and Sokol 1982; Hisrich and Brush 1986; Scherer et al. 1989; Katz 1992; Andreu 1998; Sánchez-Almagro 2003). Coming from an entrepreneurial family, the individual is gradually introduced into the business world. So, the son of an independent professional, after observing the example of his/her father or mother, tends to find more attractive an occupation with a high degree of independence and flexibility (Brockhaus 1982; Hisrich and Brush 1986). At this respect, several authors suggest that EI is inherent to the genetic disposition for entrepreneurship (Nicolaou and Shane 2010) linked to parents' status (Wang and Wong 2004; Schmitt-Rodermund 2004) and family business (Laspita et al. 2012).

Regarding EI, there is a lack of agreement on the factors that determine the individual decision to create startups, and much attention has been focused on EI (Kolvereid 1996; Autio et al. 2001; Liñan et al. 2011), and the ability to explain personality traits or demographic characteristics is still considered important (Mazzarol et al. 1999; Wagner and Sternberg 2004; Rauch and Frese 2007), but it is still unclear linked to entrepreneurship (Liñan et al. 2011).

Intentions are the antecedents of current behavior (Armitage and Conner 2001) and capture the degree to which people demonstrate the motivating factors and desire to make an effort to execute a behavior (Ajzen 1991). According to Crant (1996), the EI refers to the desire of becoming an entrepreneur and is a most powerful predictor for entrepreneurship compared to attitudes, beliefs, demographics, or personality traits (Krueger et al. 2000).

Three conceptually independent attitudinal constructs determine intentions: (1) the perceived attractiveness of behavior (attitude towards behavior); (2) the perceived subjective norm about behavior; and (3) the control of perceived behavior (Ajzen 1991; Yordanova and Tarrazon 2010). Widely supported by many empirical studies in different contexts (Zhang et al. 2015), the Theory of Planned Behavior provides a general guide for the design of interventions leading to the improvement of intentions and behavior (Yordanova and Tarrazon 2010; Liñan et al. 2011).

Regarding gender and entrepreneurship, many studies include gender as an independent variable, but gender differences in the EI are not studied. Some studies examine the relationship between gender and EI without being controlled by other variables that could mediate their relationship (Routamaa et al. 2004; Veciana et al. 2005), as with Routamaa and Mäki-Tarkka (2003) who mention that men show higher EI and make more efforts to start a business. Kourilsky and Walstad (1998) identify that female high school students are less likely to create startups and have less knowledge about entrepreneurship than male students. Wilson et al. (2004) compare adolescent women and men regarding their interest and motivation to become entrepreneurs. In short, these studies reveal that entrepreneurship is less prone for women than for men.

Other studies introduce other control variables and report that the gender effect is mediated by attitudes, subjective norms and control of perceived behavior (Kolvereid 1996), and risk disposition (Raijman 2001).

A third group of studies has found that women continue to show reduce EI after being controlled by education, entrepreneurial parents, and proactive personality (Crant 1996); personal background, attitudes, and continuous employment status (Davidsson 1995); and education, experience, family, status, motivation to work, compensation, industrial sector, functional areas, and career history (Kolvereid and Moen 1997).

Concerning the parent-children relationship, the influence of the family is crucial for the development of the occupation or career intentions of young people (Jodl et al. 2001), as the entrepreneurial status of parents leads to the development of EI in younger generations (Matthews and Moser 1996; Scherer et al. 1989; Laspita et al. 2012; Hoffmann et al. 2015).

A small number of works find the effect of parents' education on their children's EI. At this respect, Constant and Zimmermann (2003) show that education in parents directly influences on their children, as they tend to excel in mathematics, and in adult life, it is reflected in higher income (Tsukahara 2007). Aldrich and Kim (2007) show a weak influence of parents during the childhood of their children if they are only entrepreneurs, but they have a significant impact if they are entrepreneurs during the adolescent stage of their children (Laspita et al. 2012).

Consistent with research in entrepreneurship, Nicolaou and Shane (2010) propose three ways to analyze how EI is transmitted between generations. First, the tendency to develop EI can be influenced by genetic factors that are inherent in the children of entrepreneurial parents, and/or people may have a genetic predisposition to make them more sensitive to environmental stimuli representing entrepreneurial opportunities. Second, there are different types of financial and non-financial resources that wealthy parents can provide to their descendants (Aldrich et al. 1998; Dunn and Holtz-Eakin 2000; Laspita et al. 2012), so the descendants with access to all these resources can perceive that entrepreneurship is a feasible task, which triggers the development of their EI. Third, enterprising parents can unleash the EI of their children through education/socialization, that is, through the conscious or unconscious transmission of business values, knowledge, and skills across generations (Spera and Matto 2007). Specific rearing practices and exposure to business models can influence the entrepreneurial values of the descendants and create attitudes in the children to make them embark on a desirable business career (Kuratko and Hodgetts 2001; Mauer et al. 2009). Self-sufficient and autonomous parents prefer parenting practices linked to self-control and independence (Aldrich et al. 1998). Children can observe how their parents work in the family business (and may help them after school or during vacations), leading to internalize their parents' work behaviors as values and norms for their behavior (Menaghan and Parcel 1995; Carr and Sequeira 2007). Therefore, education and socialization in entrepreneurship being the family members as models can trigger the perception that entrepreneurship is a feasible and desirable career to achieve for young generations (Krueger et al. 2000; Laspita et al. 2012).

## 4 Methodology

The Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM), better known as Tecnológico de Monterrey, was founded on Sep 6, 1943, in the city of Monterrey (Mexico), based on the initiative of a group of entrepreneurs in the region. It was created with a business vision and entrepreneurship-based processes (Elizondo 1993), so the first entrepreneurship program began in 1978, and in 1985 the entrepreneurial program was formally structured in all 26 TEC de Monterrey campuses in Mexico and 18 international offices abroad (Tecnológico de Monterrey 2014; Esquivel 2011). In January 2019, Tecnológico de Monterrey has 91,200 students enrolled at a professional level and almost 10,000 professors. The sample was taken in the Guadalajara Campus, in the Mexican state of Jalisco, the second biggest campus in the number of students and university degrees (23) offered.

### 4.1 Sample

The sample is composed of 1025 Mexican and foreign students (57% men, 43% women) coming from all the 23 university courses offered, which are grouped into 6 main faculty departments (Architecture and Design, Business, Engineering, Entrepreneurship, Humanities, Medicine, and Other Careers) and students (national and international) coming from other campuses. Students' average age is 18 years old, with a minimum age of 16 years old and a maximum age of 24 years old. Tecnológico de Monterrey's students in Guadalajara show high EI in a 1–7 Likert scale, as all faculty departments have averages higher than 5, especially in business (mean = 5.91) and entrepreneurship (mean = 6.32). Regarding their parents' occupation, in the sample 62.1% are entrepreneurs, 23.2% work in the private sector, 11.2% are employed in the public sector, 2.4% are retired, 1.1% are unemployed, and 7.1% work in other activities.

### 4.2 Data Collection

Based on Mueller (2011), a survey was designed and replicated in Spain (pilot group) and corrected to be finally applied in Mexico. The instrument was tested simultaneously in a 5-hour massive event to 42 groups formed by a maximum of 25 students with an instructor previously trained for the survey application. These groups were designed heterogeneously, both in the gender and in the origin of the career department they studied to avoid biases in the application and future analysis.

## 5 Results and Discussion

The first question to answer is if the EI’s variance within and between these groups, related to the six faculties (Architecture and Design, Business, Engineering, Entrepreneurship, Humanities, Medicine, and Other Careers) analyzed at Tecnológico de Monterrey, is homogeneous ( $H_0$ ) or not ( $H_1$ ). Statistically,

$$H_0 : \mu_1 = \mu_2 = \dots = \mu_K = \mu$$

$$H_1 : \exists \mu_j \neq \mu \quad j = 1, 2, \dots, K$$

**Hypothesis 1** The type of studies chosen by students does not affect their EI.

To test hypothesis 1, we applied an ANOVA to calculate if there are differences in variances between and within the groups. Results show that the ANOVA is significant (Table 1) and there is a difference between the groups, both between and within the groups, as the  $p$ -value is less than 0.05. As a result, we reject hypothesis 1, as the type of study chosen by students does affect EI (Fig. 3).

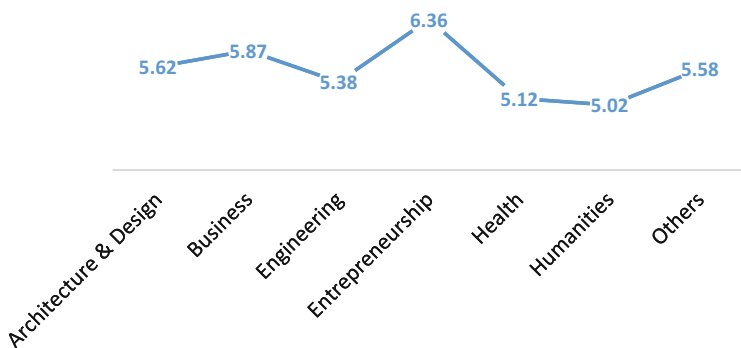
**Hypothesis 2** Men have a stronger EI than women.

To test hypothesis 2, we use and analyze the answers obtained from 997 respondents (28 answers were not valid) and study the corresponding descriptive analysis by linking gender and EI. As shown in Table 2 related to the descriptive analysis of

**Table 1** ANOVA on EI and faculty departments

	Sum of squares	Gl	Quadratic mean	$F$	Sig.
Between groups	119,762	6	19,960	11,539	0.000
Within groups	1712,561	990	1.730		
Total	1832,322	996			

Source: Authors



**Fig. 3** EI average in faculty departments. Source: Authors

**Table 2** Descriptive analysis of gender and EI

	N	Mean	St Dev	SE	95% Confidence interval for the mean		Min	Max
					Lower limit	Upper limit		
Male	571	5.5722	1.34592	0.05632	5.4615	5.6828	1	7
Female	426	5.4762	1.36986	0.06637	5.3457	5.6066	1	7
Total	997	5.5312	1.35635	0.04296	5.4469	5.6155	1	7

Legend: Max (maximum), Min (minimum), St Dev (standard deviation), SE (standard error)  
 Source: Authors

**Table 3** Levene’s test of homogeneity of variances

Levene statistic	df1	df2	Sig.
0.781	1	995	0.377

Legend: df (degrees of freedom), Sig (significance)  
 Source: Authors

**Table 4** ANOVA on gender and EI

	Sum of squares	Gl	Quadratic mean	F	Sig.
Between groups	2.248	1	2.248	1.222	0.269
Within groups	1830.075	995	1.839		
Total	1832.322	996			

Source: Authors

the relationship in the sample between gender and EI, given a 1–7 Likert scale, men (mean = 5.57) show higher EI than women (mean = 5.48), and both genders show high and similar EI. This lower dispersion on the EI results is given by education, so that higher educational level, the EI in both men and women, is stronger.

To know if both groups are different, we apply the Levene’s test for equality of variances. As seen in Table 3, the *p*-value (significance) is 0.377, greater than 0.05, so we accept the homogeneity of the variances between groups. As a result, the Levene statistic can be resumed as

$$F(1995) = 0.781, p = 0.377$$

As a result, we reject hypothesis 2.

**Hypothesis 3** Gender is a key factor to impulse EI.

As seen in Table 4, the *p*-value is 0.269, so a significant ANOVA is not obtained. However, as the sample complies with the Levene’s test of homogeneity of variances (significance (*p*-value) = 0.377 > 0.05), it shows homoscedasticity (not significant differences) between the groups. As a result, we reject hypothesis 3.

**Hypothesis 4** Parents’ occupation and their higher level of studies positively determine the EI on their children.

**Table 5** ANOVA on father’s work and EI

	Sum of squares	Gl	Quadratic mean	F	Sig.
Between groups	60.329	5	12.066	6.679	0.000
Within groups	1761.471	975	1.807		
Total	1821.800	980			
1–7 Likert scale	Mean			Mean	
Entrepreneur	5.77		Non-entrepreneur	5.31	

Source: Authors

**Table 6** Parents’ schooling

		N	%
School	No studies	2	0.20
	Primary school	20	1.96
	Secondary school	37	3.63
HEI	Mid-graduate (3 years)	129	12.65
	Graduate	536	52.55
	Postgraduate	287	28.14
	No data	9	0.88

Source: Authors



**Fig. 4** EI average and work occupation. Source: Authors

Results in Tables 5 and 6 show that the EI’s average in a 1–7 Likert scale is higher when the father is an entrepreneur (mean = 5.77) that non-entrepreneur (mean = 5.31) being significant the results in Table 5. In the descriptive analysis, 55% of the parents in the sample are entrepreneurs, and regarding the level of studies (Table 6), there is a predominance of educated parents, as 952 (93.34%) have a university level of studies (Fig. 4). As a result, we accept hypothesis 4. Our results agree with Naranjo et al. (2016) who affirm that a higher educational level incentivizes entrepreneurship.

## 6 Conclusions

As shown in our results, and according to Eccles (1994) and Wilson et al. (2007), women are more likely to have lower expectations than men for success in a wide range of occupations. Among the factors to explain the disparity between men and women is due to differences in entrepreneurial self-efficacy or self-confidence in need for skills to be successful in creating companies. It has been shown that self-confidence plays an important role in determining the level of interest to pursue an entrepreneurial career (Wilson et al. 2007).

Some authors affirm that women are more subject than men to limit their career options due to their lack of confidence in their aptitudes (Bandura 1992), so females avoid entrepreneurial actions as they think are lacking of the skills (Chen et al. 1998) and attitude required (Davidsson 1995; Veciana et al. 2005; Yordanova and Tarrazon 2010), because the society tend to relate business activity to men (Bird and Brush 2002; Bruni et al. 2004; Bruin et al. 2006), and women are seen as less able to be successful entrepreneurs than men (Buttner and Rosen 1988). However, our results reveal an opposite trend, as we show that both men and women have a favorable attitude favorable towards EI, so independently from gender, any student has a high probability of becoming a future entrepreneur endowed with a high entrepreneurial self-efficacy as they dispose of a high EI (Chen et al. 1998; DeNoble et al. 1999; Krueger et al. 2000; Scott and Twomey 1988; Segal et al. 2002; Wang et al. 2002; Wilson et al. 2007).

As with Laspita et al. (2012), enterprising parents have a significant influence during the adolescent stage of their children. This fact is crucial because there is little empirical evidence showing the importance and nature of parents as models leading their children to become entrepreneurs (Hoffmann et al. 2015). Therefore, in these students, the influence of the family is critical for their career intentions (Jodl et al. 2001), especially if they are the educated elite of their nations (Mueller 2004; Shinnar et al. 2012), a situation that is especially visible in developing countries. This finding is consistent with Dunn and Holtz-Eakin (2000), who found that children from an entrepreneurial father are often more self-employed. Besides, Chlosta et al. (2012) find that the father, and not the mother, explains the variation in their children's decision to become entrepreneurs (Laspita et al. 2012).

However, as seen in the literature, the level of the father's study does not have a direct impact on the career or occupation chosen by their children. However, according to our results, 93.34% of parents have graduate and postgraduate studies so, as with Constant and Zimmermann (2003) and Tsukahara (2007), better-educated parents will be reflected on children with higher incomes. In other words, parents' schooling has a significant positive effect on the choice of their children's professional occupations.

Finally, although parental education does not affect the children's occupational choice directly, it seems to have an indirect effect on the children's own choice through the education they are given (Tsukahara 2007), as also is shown in our results. As a result, quality parental education focused on entrepreneurship will be

beneficial for achieving sustainable human capital management that will also be beneficial for society.

## 6.1 *Limitations*

Our conclusions are limited in scope for various reasons. First, some researchers criticize the use of student as a sample (Robinson et al. 1991), but the use of this type of samples is quite common and convenient in the research on entrepreneurial initiatives (Mueller and Thomas 2001). Second, although Yordanova and Tarrazon (2010) affirm that students are not an adequate substitute for the general population due to their lack of work experience and maturity, we have used students in the sample because many large companies worldwide started when their founders were university students (e.g., FedEx, Dell, Facebook, Microsoft). Also, thousands of startups are being impulsed at HEI's business incubators and accelerators. And third, we have done this research at Tecnológico de Monterrey, so results should be interpreted in a regional context only.

## 6.2 *Future Research*

As future research, we aim to expand this analysis to other HEI systems and countries to analyze differences and similitudes between them. Following Gartner (1985), entrepreneurship is a heterogeneous group of people confronting a common definition and common predictors. Therefore, and although the average personality profile of an entrepreneur cannot be determined, we will continue analyzing the psychological, social, and economic variables that influence them.

## References

- Ajzen, I. (1991). Theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.
- Aldrich, H. E., & Kim, P. H. (2007). A life course perspective on occupational inheritance: Self-employed parents and their children. *Research in the Sociology of Organizations*, 25, 33–82.
- Aldrich, H., Renzulli, L. A., & Langton, N. (1998). Passing on privilege: Resources provided by self-employed parents to their self-employed children. *Research in Social Stratification and Mobility*, 16, 291–318.
- Alexei, T., & Kolvereid, L. (1999). Self-employment intentions among Russian students. *Entrepreneurship and Regional Development*, 11(3), 269–271.
- Andreu, J. C. (1998). *La empresa joven ante el reto del 2000. Dificultades para crear riqueza y empleo. IV Congreso Nacional de Jóvenes Empresarios*, May 21, Madrid (Spain).



- Arman, S. M. (2017). Impact of sustainable human resource management in organizational performance: A study on Bangladeshi HR professionals. In *Proceedings of 15th Asian business research conference*, 22–23 December, Dhaka (Bangladesh).
- Armitage, C., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *British Journal of Social Psychology*, 40(4), 471–499.
- Audet, J. (2002). A longitudinal study of the entrepreneurial intentions of university students. In *Frontiers of entrepreneurship research*. Wellesley, Mass: Babson College.
- Autio, E., Keeley, R. H., Klofsten, M., Parker, G. G. C., & Hay, M. (2001). Entrepreneurial intent among students in Scandinavia and in the USA. *Enterprise and Innovation Management Studies*, 2(2), 145–160.
- Bandura, A. (1992). *Exercise of personal agency through the self-efficacy mechanism*. New York: Hemisphere Publishing Corp.
- Baron, R. A. (2002). OB and entrepreneurship: The reciprocal benefits of closer conceptual links. In B. M. Staw & R. M. Kramer (Eds.), *Research in organizational behavior – an annual series of analytical essays and critical reviews* (Vol. 24, pp. 225–270). Oxford: Elsevier Science.
- Bird, B., & Brush, C. (2002). A gender perspective on organizational creation. *Entrepreneurship: Theory and Practice*, 26(3), 41–58.
- Brockhaus, R. H. (1982). The psychology of the entrepreneur. In C. A. Kent, D. L. Sexton, & K. Vesper (Eds.), *Encyclopedia of entrepreneurship* (pp. 39–56). Englewood Cliffs: Prentice Hall.
- Bruin, A., Brush, C., & Welter, F. (2006). Introduction to the special issue: Towards building cumulative knowledge on women's entrepreneurship. *Entrepreneurship: Theory and Practice*, 30(5), 585–593.
- Bruni, A., Gherardi, S., & Poggio, B. (2004). Entrepreneur-mentality, gender and the study of women entrepreneurs. *Journal of Organizational Change Management*, 17(3), 256–269.
- Buttner, E. H., & Rosen, B. (1988). Bank loan officers' perceptions of the characteristics of men, women, and successful entrepreneurs. *Journal of Business Venturing*, 3(3), 249–258.
- Carr, J. C., & Sequeira, J. M. (2007). Prior family business exposure as intergenerational influence and entrepreneurial intent: A theory of planned behavior approach. *Journal of Business Research*, 60(10), 1090–1098.
- Chen, C. C., Greene, P. G., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers? *Journal of Business Venturing*, 13(4), 295–316.
- Chlosta, S., Patzelt, H., Klein, S. B., & Dormann, C. (2012). Parental role models and the decision to become self-employed: The moderating effect of personality. *Small Business Economics*, 38(1), 121–138.
- Constant, A., & Zimmermann, K. F. (2003). Occupational choice across generations. *Applied Economics Quarterly*, 49, 299–317.
- Crant, M. (1996). The proactive personality scale as a predictor of entrepreneurial intentions. *Journal of Small Business Management*, 34(3), 42–49.
- Davidsson, P. (1995). Determinants of entrepreneurial intentions. In *RENT IX Conference*. Piacenza, Italy.
- De Noble, A. F., Jung, D., & Ehrlich, S. B. (1999). Entrepreneurial self-efficacy: The development of a measure and its relationship to entrepreneurial action. *Frontiers of Entrepreneurship Research*, 1, 73–87.
- Douglas, E. J., & Shepherd, D. A. (2002). Self-employment as a career choice: Attitudes, entrepreneurial intentions, and utility maximization. *Entrepreneurship: Theory and Practice*, 26(3), 81–90.
- Dunn, T., & Holtz-Eakin, D. (2000). Financial capital, human capital, and the transition to self-employment: Evidence from intergenerational links. *Journal of Labor Economics*, 18(2), 282–305.
- Eccles, J. (1994). Understanding women's educational and occupational choices. *Psychology of Women Quarterly*, 18, 585–609.

- Eide, E. B., & Rösler, P. (2015). Bridging the skills and innovation gap to boost productivity in Latin America. In *The competitiveness lab: A world economic forum initiative*. Geneva: World Economic Forum and Deloitte.
- Elizondo, R. E. (1993). *El Tecnológico de Monterrey: Relación de 50 años*. México: Instituto Tecnológico y de Estudios Superiores de Monterrey.
- Esquivel, F. (2011). *El Sistema Tecnológico de Monterrey en el año 2011*. México: Instituto Tecnológico y de Estudios Superiores de Monterrey.
- Gartner, W. B. (1985). A conceptual framework for describing the phenomenon of new venture creation. *Academy of Management Review*, 10(4), 494–706.
- Gartner, W. B. (1988). “Who is an entrepreneur” is the wrong question. *American Journal of Small Business*, 13(1), 11–32.
- Hasan, A., Hassan, M. S. M., & Fauzi, M. N. H. (2017). Exploring a green element to greening the existing curriculum in polytechnic Malaysia. *Pertanika Journal of Social Sciences and Humanities*, 25(5), 217–223.
- Hisrich, R. D., & Brush, C. G. (1986). *The woman entrepreneur: Starting, financing and managing a successful new business*. Lexington: Lexington Books.
- Hoffmann, A., Junge, M., & Malchow-Møller, N. (2015). Running in the family: Parental role models in entrepreneurship. *Small Business Economics*, 44(1), 79–104.
- Jodl, K. M., Michael, A., Malanchuk, O., Eccles, J. S., & Sameroff, A. (2001). Parents’ roles in shaping early adolescents’ occupational aspirations. *Child Development*, 72(4), 1247–1265.
- Katz, J. (1992). A psychological cognitive model of employment status choice. *Entrepreneurship: Theory and Practice*, 17(1), 29–37.
- Kimbu, A. N., Ngoasong, M. Z., Adeola, O., & Afenyo-Agbe, E. (2018). Collaborative networks for sustainable human capital management in women’s tourism entrepreneurship: The role of tourism policy. *Tourism Planning and Development*, 16(2), 161–178.
- Kolvereid, L. (1996). Prediction of employment status choice intentions. *Entrepreneurship: Theory and Practice*, 21(1), 47–57.
- Kolvereid, L., & Moen, O. (1997). Entrepreneurship among business graduates: Does a major in entrepreneurship make a difference? *Journal of European Industrial Training*, 21(4), 154–160.
- Kourilsky, M., & Walstad, M. (1998). Entrepreneurship and female youth: Knowledge, attitudes, gender differences and educational practices. *Journal of Business Venturing*, 13(1), 77–88.
- Krueger, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5), 411–432.
- Kuratko, D. F., & Hodgetts, R. M. (2001). *Entrepreneurship: A contemporary approach*. Fort Worth: Harcourt College Publishers.
- Laspita, S., Breugst, N., Hebllich, S., & Patzelt, H. (2012). Intergenerational transmission of entrepreneurial intentions. *Journal of Business Venturing*, 27(4), 414–435.
- Liñan, F., & Fayolle, A. (2015). A systematic literature review on entrepreneurial intentions: Citation, thematic analyses, and research agenda. *International Entrepreneurship and Management Journal*, 6, 1–27.
- Liñan, F., Rodríguez-Cohard, J. C., & Rueda-Cantuche, J. M. (2005). *Factors affecting entrepreneurial intention levels, 45th congress of the European regional science association: “Land use and water Management in a Sustainable Network Society,” 23–27 August 2005*. Amsterdam: The Netherlands, European Regional Science Association (ERSA), Louvain-la-Neuve.
- Liñan, F., Rodríguez-Cohard, J. C., & Rueda-Cantuche, J. M. (2011). Factors affecting entrepreneurial intention levels: A role for education. *International Entrepreneurship and Management Journal*, 7(2), 195–218.
- Low, K., Yoon, M., Roberts, B., & Rounds, J. (2005). The stability of vocational interests from early adolescence to middle adulthood: A quantitative review of longitudinal studies. *Psychological Bulletin*, 131(5), 713–737.
- Maldonado-Maldonado, A. (2002). Higher education research in Latin America. *International Higher Education*, 28, 23–25.

- Marlino, D., & Wilson, F. (2003). *Teen girls on business: Are they being empowered?* Boston and Chicago: Simmons School of Management and The Committee of 2003.
- Matherly, L. L., & Al Nahyan, S. S. (2015). Building competitiveness through effective governance of national-expatriate knowledge transfer and development of sustainable human capital. *International Journal of Organizational Analysis*, 23(3), 456–471.
- Matthews, C. H., & Moser, S. B. (1996). A longitudinal investigation of the impact of family background and gender on interest in small firm ownership. *Journal of Small Business Management*, 34(2), 29–43.
- Mauer, R., Neergaard, H., & Linstad, A. K. (2009). Self-efficacy: Conditioning the entrepreneurial mindset. In *Understanding the entrepreneurial mind* (pp. 233–257). New York: Springer.
- Mazzarol, T., Volery, T., Doss, N., & Thein, V. (1999). Factors influencing small business start-ups. A comparison with previous research. *International Journal of Entrepreneurial Behaviour & Research*, 5(2), 48–63.
- Menaghan, E. G., & Parcel, T. L. (1995). Social sources of change in children's home environments: The effects of parental occupational experiences and family conditions. *Journal of Marriage and the Family*, 21, 69–84.
- Minniti, M., Arenius, P., & Langowitz, N. (2005). 2004 report on women and entrepreneurship. In *Global entrepreneurship monitor*. Wellesley, MA: The Center for Women's Leadership at Babson College.
- Mueller, S. L. (2004). Gender gaps in potential for entrepreneurship across countries and cultures. *Journal of Developmental Entrepreneurship*, 9(3), 199–220.
- Mueller, S. (2011). Increasing entrepreneurial intention: Effective entrepreneurship course characteristics. *International Journal of Entrepreneurship and Small Business*, 13(1), 55–74.
- Mueller, S. L., & Thomas, A. S. (2001). Culture and entrepreneurial potential: A nine-country study of locus of control and innovativeness. *Journal of Business Venturing*, 16(1), 51–75.
- Naranjo, E. E., Campos, M. E., & López, L. N. (2015). *Reporte GEM México*. Global Entrepreneurship Monitor (GEM) Mexico: Mexico DF.
- Naranjo, E., Campos, M., & López, L. (2016). *Global Entrepreneurship Monitor: Reporte Nacional 2015-2016 México*. Mexico: Tecnológico de Monterrey.
- Nicolaou, N., & Shane, S. (2010). Entrepreneurship and occupational choice: Genetic and environmental influences. *Journal of Economic Behavior & Organization*, 76(1), 3–14.
- OECD. (2018). *Education at a glance. OECD indicators*. Paris (France): OECD Publishing. <http://dx.doi.org/10-1787/eag-2018-en>
- Pisal, S. M. M., Aris, I. B., Sahari, M. M., et al. (2015). In *10th Asian control conference: Emerging control techniques for a sustainable world*, 31st May–3rd June, Kota Kinabalu, Sabah (Malaysia).
- Rajman, R. (2001). Determinants of entrepreneurial intentions: Mexican immigrants in Chicago. *Journal of Socio-Economics*, 30(5), 393–411.
- Rauch, A., & Frese, M. (2007). Let's put the person back into entrepreneurship research: A meta-analysis on the relationship between business owners' personality traits, business creation, and success. *European Journal of Work and Organizational Psychology*, 16(4), 353–385.
- Robinson, P. B., Stimpson, D. V., Huefner, J., & Hunt, H. K. (1991). An attitude approach to the prediction of entrepreneurship. *Entrepreneurship: Theory and Practice*, 15(4), 13–31.
- Routamaa, V., & Mäki-Tarkka, K. (2003). *The case of Finland. Towards an entrepreneurship policy—A nordic perspective*. Nordic Innovation Centre. FSF, 2.
- Routamaa, V., Hautala, T., & Rissanen, A. (2004). Hunting for female entrepreneurs: Entrepreneurial capacity and gender. In *Proceedings from 2004 ICSB World Conference*, Sandton-Johannesburg.
- Sánchez-Almagro, M. L. (2003). *Perfil Psicológico del Autoempleado*. Ph.D. Thesis, Complutense University of Madrid, Madrid, Spain.
- Scherer, R. F., Adams, J. S., Carley, S. S., & Wiebe, F. A. (1989). Role model performance effects on development of entrepreneurial career preference. *Entrepreneurship: Theory and Practice*, 13(3), 53–81.

- Schmitt-Rodermund, E. (2004). Pathways to successful entrepreneurship: Parenting, personality, early entrepreneurial competence, and interests. *Journal of Vocational Behavior*, 65(3), 498–518.
- Scott, M. G., & Twomey, D. F. (1988). The long-term supply of entrepreneurs: Students' career aspirations in relation to entrepreneurship. *Journal of Small Business Management*, 26(4), 5.
- Segal, G., Borgia, D., & Schoenfeld, J. (2002). Using social cognitive career theory to predict self-employment goals. *New England Journal of Entrepreneurship*, 5(2), 8.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 217–226.
- Shapero, A., & Sokol, L. (1982). Social dimensions of entrepreneurship. In C. A. Kent, D. L. Sexton, & K. H. Vesper (Eds.), *Encyclopedia of entrepreneurship* (pp. 72–90). Englewood Cliffs: Prentice Hall.
- Shaver, K. G., & Scott, L. R. (1991). Person, process, choice: The psychology of new venture creation. *Entrepreneurship: Theory and Practice*, 16, 23–45.
- Shinnar, R. S., Giacomini, O., & Janssen, F. (2012). Entrepreneurial perceptions and intentions: The role of gender and culture. *Entrepreneurship: Theory and Practice*, 36(3), 465–493.
- Slaper, T. F., & Hall, T. J. (2011). The triple bottom line (by Asmit Agarwal): What is it and how does it work? *Indiana Business Review*, 86(1), 1–15.
- Sonnenfelt, J., & Kotter, J. P. (1982). The maturation of career theory. *Human Relations*, 35, 19–46.
- Spera, C., & Matto, H. C. (2007). A contextual-congruence model of socialization. *Families in Society: The Journal of Contemporary Social Services*, 88(4), 551–560.
- Tecnológico de Monterrey. (2014). *Campus Historia del Campus Tecnológico de Monterrey [en línea]*. Guadalajara: Instituto Tecnológico y de Estudios Superiores de Monterrey. <http://www.itesm.mx/wps/wcm/connect/Campus/GDA/Guadalajara/Acerca+del+campus/Historia/> [Consulted: Jan 30, 2019].
- Tsukahara, I. (2007). The effect of family background on occupational choice. *Labour*, 21(4–5), 871–890.
- Veciana, J. M., Aponte, M., & Urbano, D. (2005). University students' attitudes towards entrepreneurship: A two countries comparison. *International Entrepreneurship and Management Journal*, 1(2), 165–182.
- Wagner, J., & Sternberg, R. (2004). Start-up activities, individual characteristics, and the regional milieu: Lessons for entrepreneurship support policies from German micro data. *Annals of Regional Science*, 38(2), 219–240.
- Wang, C., & Wong, P. (2004). Entrepreneurial interest of university students in Singapore. *Technovation*, 24(2), 163–172.
- Wang, C., Wong, P., & Lu, Q. (2002). Tertiary education and entrepreneurial intentions. In *Technological entrepreneurship* (pp. 55–82). Greenwich, CT: Information Age Publishing.
- Wilson, F., Marlino, D., & Kickul, J. (2004). Our entrepreneurial future: Examining the diverse attitudes and motivations of teens across gender and ethnic identity. *Journal of Developmental Entrepreneurship*, 9(3), 177–198.
- Wilson, F., Kickul, J., & Marlino, D. (2007). Gender, entrepreneurial self-efficacy, and entrepreneurial career intentions: Implications for entrepreneurship education. *Entrepreneurship: Theory and Practice*, 31(3), 387–406.
- Yordanova, D. I., & Tarrazon, M.-A. (2010). Gender differences in entrepreneurial intentions: Evidence from Bulgaria. *Journal of Developmental Entrepreneurship*, 15(03), 245–261.
- Zhang, P., Wang, D. D., & Owen, C. L. (2015). A study of entrepreneurial intention of university students. *Entrepreneurship Research Journal*, 5(1), 61–82.

# Knowledge Accumulation and Its Effects on Organizational Effectiveness in Family Firms

Ismael Barros-Contreras and Jesús Manuel Palma-Ruiz

**Abstract** In the family firm, the process of knowledge accumulation is strongly influenced by the common history of the family, the relationships of trust, and the affective relationships between the family members that foster communication, which improves knowledge management and promotes learning. All of this leads to better organizational effectiveness in this particular group of firms. With the goal of verifying these relationships, we provide a series of propositions in order to pave the way for future studies to address and test these relationships of family involvement and essence, basic to the concept of the family firm, which should have distinct effects over the process of knowledge accumulation affecting the organizational effectiveness, behavior, and performance of the firm.

**Keywords** Competences · Dynamic capabilities · Effectiveness · Essence · Family firms · Involvement · Knowledge sharing · Knowledge accumulation

## 1 Introduction

The research suggests that family firms excel in performance over non-family firms (Anderson and Reeb 2003); however, the mechanisms and processes that bring about these differences in performance still need to be studied in detail (Chrisman et al. 2009). Contributions from the resource-based theory indicate that family involvement in the firm is the source of the bundle of distinctive resources and capabilities a particular organization possesses because of the interaction between the family, its individual members, and the business (*familiness*) (Habbershon and

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Williams 1999), source of competitive advantage in the family firm (Habbershon et al. 2003).

In the process of creating *familiness* in a firm, the founder and descendants must have the desire to pass the business onto the next generations. With this, the family's values and cultures are imprinted on the firm, and at the same time, the family transfers its experience and knowledge in a way that permits the viability and expansion of the firm. The family vision is thus projected onto the firm, making it have distinctive characteristics supported by the family and the family relationships; at the same time, the family absorbs the qualities of the business and its impacts on life and family routines (Sorenson 2000).

Thus, the *familiness* has an essential role in the process of knowledge accumulation, as recognized by Chirico (2008) in his empirical study of four cases of family firms in the wine sector in Italy and Switzerland. These results allow proposing a model of knowledge accumulation that goes further into the analysis of other different particularities of knowledge in family firms (Chirico and Salvato 2016) and serves as the starting point in the study of the process of knowledge accumulation in family firms. While this model also poses the effects of knowledge accumulation on the survival of family firms, further research is needed to improve the understanding of this relationship, considering the organizational routines that are generated as a result of this survival (Teece 2007).

It is the aim of this chapter to further the understanding of the antecedents and the consequences of the process of knowledge accumulation in family firms from the model proposed by Chirico (2008). We use the existing literature on family firms that suggests that the involvement (ownership, management, and generational transfer) and the family essence (family values and cultures, predisposition of the family to maintain the business for the long term) constitute the distinctive elements of the family firm and form a fundamental part of the process of knowledge accumulation. In addition, we use the fundamentals of the dynamic capabilities approach to discover the relationships between this process of the accumulation of knowledge and its effects on the generation of effective organizational routines that guarantee the survival of the family firms.

Our study contributes to the literature on family firms in several areas. First, in the sphere of family firm research, it improves the understanding of how the involvement and essence of the family in the firm promote the process of knowledge accumulation (Chirico 2008). Second, this work contributes to the understanding of how family involvement and essence promote the generation of resources and capabilities as basic elements of organizational effectiveness, behavior, and performance of the family firm (Astrachan 2010). Third, this paper contributes to the incorporation of dynamic capabilities, providing a discussion about how involvement and essence can contribute to this process of dynamic capabilities building in the family firm (Chirico and Salvato 2008).

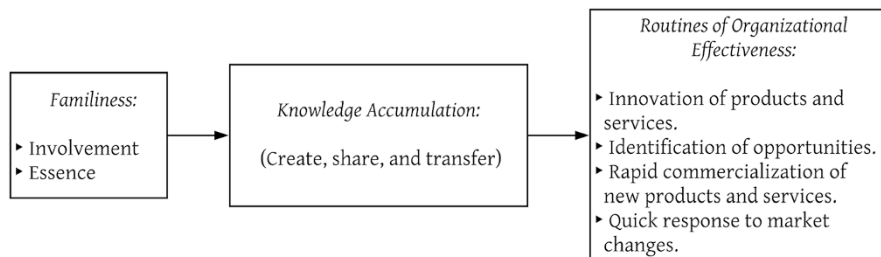
This chapter is organized as follows. In Sect. 2, we first present the conceptual framework and a series of propositions. In Sect. 3, the conclusions are outlined. Finally, Sect. 4 discusses interesting lines for further investigation.

## 2 The Process of Knowledge Accumulation in the Family Firm

Family firms are, in general, organizations where the learning process and knowledge management are accomplished in a distinct manner, promoted by the intense social interactions between family members (Cabrera-Suárez et al. 2001). In particular, from social capital theory, those interactions are referred to as structural (connections and networks between members), cognitive (shared experiences and understandings between members that provide enduring relationships) (Cunningham et al. 2017; Pittino et al. 2018), and relational (the nature and quality of connections) (Nahapiet and Ghoshal 1998). These social interactions generate the unique capabilities of the family firm which are responsible for those distinctive processes. Moreover, the specific knowledge of the family firms and the abilities to create it and transfer it are considered fundamental assets (Woodfield and Husted 2017; Grant 1996a), which are positively associated with high levels of performance (Pittino et al. 2018; Cabrera-Suárez et al. 2001) and organizational effectiveness (Gold et al. 2001; Zheng et al. 2010).

In particular, the process of knowledge accumulation in the family firm is unique; the emotional involvement, the common life history, and the use of private language in family firms all improve communication between family members (Tagiuri and Davis 1996). The knowledge accumulation is a mechanism of organizational learning from which the firm's organizational routines are developed, providing the basis for the generation of dynamic capabilities (Zollo and Winter 2002) that permit an organization to create, extend, or modify its resource base (Helfat et al. 2007). Dynamic capabilities allow a firm to broaden, change, or create ordinary capabilities by accessing and recombining knowledge, thus enabling success in its organizational effectiveness and generation of value over time (Teece et al. 1997; Eisenhardt and Martin 2000; Zollo and Winter 2002). In the particular field of family firms, knowledge accumulation refers to the explicit (family protocols) and tacit (learning by doing) knowledge that the family members that work in the firm obtain and develop through education and experience (Chirico 2007).

This process of knowledge accumulation allows them to create more efficient routines of knowledge exchange with greater privacy in comparison with non-family firms, thus developing an idiosyncratic knowledge which fosters the recombination and re-configuration of family resources and the continuity of the business from generation to generation (Chirico and Salvato 2008). The interactions of the family, the firm, and the family members influence the bundle of resources that are available in the organization (Habbershon and Williams 1999; Habbershon et al. 2003); in order to use these resources, the family firms foster their idiosyncratic process of knowledge management and learning; this process is strongly conditioned by the family's presence in the firm through ownership, management, and generational involvement. It is particularly important to analyze the components of tacit knowledge of family firms; to live in the family and work in the firm from a young age allow the family members to develop profound levels of specific tacit knowledge of



**Fig. 1** The process of knowledge accumulation and its effect on organizational effectiveness in family firms. Source: Authors

the firm (Chirico and Nordqvist 2010). Thus, the accumulation of knowledge can start within the family, in the home, and continue throughout a career in the firm (Gersick et al. 1997; Chirico and Salvato 2008). Moreover, it is vital to the development of the process of accumulation of knowledge that a sense of trust exists between the family members that facilitates the ease of their interactions (Chirico 2008).

Therefore, the family provides the firm with a particular endowment that the literature refers to as *familianness*—family involvement and essence (Chrisman et al. 2005)—to create an idiosyncratic process of knowledge accumulation that foster organizational effectiveness (Chirico 2008) (Fig. 1).

## 2.1 *Family Involvement and Essence and Knowledge Accumulation*

The involvement approach has been utilized by scholars in order to distinguish family firms from non-family firms (Chua et al. 1999); in other words, it is based on family ownership, family management, and the presence of multiple generations of the family in the firm. Family involvement is a necessary condition, but it cannot predict the extent to which the family applies its influence (Chrisman et al. 2012). The essence approach considers the intentions of trans-generational control and family commitment, manifested through the long-term orientation of the firm, the longevity of the managers, the strong social capital, and the socioemotional wealth that usually characterize firms with substantial family involvement (Chua et al. 1999).

Family involvement is a precondition to essence (Chrisman et al. 2012). Together, involvement and essence constitute family influence (*familianness*) (Chua et al. 1999). This influence is manifested in a variety of ways: through the strategic decision-making process of the firm (Klein et al. 2005); in the family's intention to maintain the control (Litz 1995; Gómez-Mejía et al. 2007); in the behavior that is a consequence of the vision developed by a dominate coalition that controls the firm with the intention that the firm be sustainable throughout the generations (Chua et al.



1999); and the generation of unique resources, indivisible and synergistic capabilities derived from the involvement of the family and its interactions (Habbershon et al. 2003).

Both approaches complement and incorporate each other in capturing the diversity of family firms (Chrisman et al. 2005; Chrisman et al. 2012). In this sense and according to Basco (2013), we use both approaches in an integrated manner in order to try to explain how the effects of the family can influence the process of knowledge accumulation.

### **2.1.1 Family Involvement and Essence and the Process of Internal Knowledge Accumulation**

Family influence in the firm is exercised through involvement, that is to say, by means of the ownership and management structures, the family involvement in management, and the generations that participate in the firm (Chrisman et al. 2012), and the essence, which is generated from the family's intention to maintain control over successive generations (Litz 1995; Chua et al. 1999; Chrisman et al. 2004), which, from a socioemotional perspective, reveals the commitment of the family with the firm (Klein et al. 2005) and promotes the implementation of knowledge accumulation, with the clear objective to maintain control and preserve the family's socioemotional wealth in the long run (Gómez-Mejía et al. 2007).

The literature emphasizes that involvement is a precondition to essence in a family firm (Chrisman et al. 2012); thus, involvement is related to essence—if the former increases, the latter should also increase (Chrisman et al. 2012). Therefore, essence measures the family's intention to manage the firm in order to achieve its vision of the business that goes beyond the life expectancy of the current generation (Chua et al. 1999; Gómez-Mejía et al. 2007) and that leads it to pursue non-economic objectives (Chrisman et al. 2012). It represents an unequivocal signal that the family will exercise its influence to establish processes that guarantee knowledge accumulation, particularly processes between family members that will permit knowledge transfer to the following generations, thus creating and preserving the socioemotional wealth of the family members (Gómez-Mejía et al. 2007; Gómez-Mejía et al. 2011a).

Family commitment directs the personal values and beliefs of the family members toward the objectives of the firm (Chrisman et al. 2012); this commitment not only derives from being shareholders of the firm—a necessary but not completely sufficient condition—but it also requires that the family feels that the firm is theirs and requires that its members involve themselves in the firm activities, even in an informal way (Carlock and Ward 2001). Not all of the family members will have the same level of commitment and interest in the family firm, especially after the second or third generation (Thomas 2001); thus, family members from different generations can have differing perspectives, and these differences can generate conflicts (Gersick et al. 1997; Grote 2003) affecting their commitment to the firm. In this sense a low level of commitment with the family firm can negatively affect the

process of knowledge accumulation (Barach and Ganitsky 1995; Nonaka and Takeuchi 1995; Astrachan et al. 2002). In view of all of the above, it is suggested that the components of involvement (power and experience) can have different impacts over the essence. Family members, who want to retain the family in the firm, are willing to go beyond the parameters of their normal job duties, which help in the transfer of knowledge and experience (Chirico 2008). The normal co-worker relationships go beyond the boundaries of the workplace which give rise to the existence of better cooperation and interchange of information and experiences, helping to overcome workplace conflicts (Kusunoki et al. 1998). The close workplace relationships allow family members to acquire experience and develop practical skills in the family firm (Chirico 2007); furthermore, the trans-generational communication in the family firm can help knowledge creation in the long term (Gersick et al. 1997; Cabrera-Suárez et al. 2001; Kellermanns and Eddleston 2004).

Thus, the power represented by the family's involvement as shareholders and directors in the firm, as well as the depth of experience, shown by the number of generations involved in the ownership, governance, and management, affects the family essence—in other words, the commitment and the sense of emotional belonging of the family members. This essence becomes an element that mediates the relation between the components of involvement and the process of internal knowledge accumulation in the family firm. Thus, we formulate the following hypothesis:

**Proposition 1** Essence has a mediating effect in the relationship between the components of involvement and the process of internal knowledge accumulation in the family firm.

### 2.1.2 Family Involvement and Essence and the Process of External Knowledge Accumulation

Involvement and essence are considered key aspects of the desire to preserve capital, not just shareholder equity but also socioemotional capital throughout the generations, causing the family firm to hire family members to occupy management positions—mainly for reasons of control and flexibility—instead of hiring non-family executives (Eddleston et al. 2008). Prior research suggests that family firms are reluctant to professionalization (Kets de Vries 1993; Gersick et al. 1997; Gómez-Mejía et al. 2007); this tendency is based on the desire for the preservation of socioemotional wealth of the family in the family firm (Gómez-Mejía et al. 2011a). Delegating authority to non-family members reduces control over strategic decisions; one example is that hiring an expert, who has a specialized knowledge which differs from the experience of the family owners, increases the asymmetries of information (Gómez-Mejía et al. 2011b). In particular, hiring of non-family directors increases the conflicts about the firm's goals due to the divergent motivations and career objectives of the family employees versus those non-family employees (Gersick et al. 1997).

Family firms are usually less formal with their human resource policies; the selection processes are normally limited to a small number of candidates who share the same family values and cultures (Cruz et al. 2010). In addition, they put more emphasis on informal relationships (Kotey and Folker 2007) and give more importance to personal relationships (Fiegener et al. 1996). The intention of trans-generational family control puts emphasis on long-term planning, while, in general, external training focuses on short-term goals; therefore, new employees are involved with the values and norms of the organization, strengthening their identification with the firm and building the socioemotional wealth of the family (Gómez-Mejía et al. 2011a). In short, the family's desire to build an atmosphere that helps transmit the family culture and values is associated with a lower propensity to use external sources of knowledge accumulation. This argument allows us to propose the following hypothesis:

**Proposition 2** Essence has a mediating effect on the relationship between the family involvement components and external knowledge accumulation in the family firm.

### 2.1.3 Knowledge Accumulation and Organizational Effectiveness

Organizational effectiveness can be defined as the degree to which a firm makes good decisions which allow it to capture a greater market share and get better results in growth and innovation compared to its competitors (Zheng et al. 2010; Feranita et al. 2017). Research confirms that knowledge management is a key tool for the achievement of organizational effectiveness (Gold et al. 2001; Zheng et al. 2010). Thus, a firm can take advantage of learning to improve its capabilities and create values over time and, in agreement with Gold et al. (2001), improve its ability to innovate, coordinate efforts, quickly market new products, respond to changes in the market, and maintain the capability to anticipate unexpected changes (Nonaka et al. 2000), promoting organizational effectiveness (Gold et al. 2001; Zheng et al. 2010).

Knowledge needs to be accumulated in order to generate values over time (Chirico 2008); thus, accumulation of knowledge is the motor for organizational learning mechanisms (Nielsen 2006) and constitutes the basic pillar for the generation of dynamic capabilities (Nonaka 1994; Grant 1996b; Zollo and Winter 2002; Nielsen 2006). In this way, organizational learning mechanisms allow the configuration and re-configuration of the firm's resources and operational routines (Cepeda and Vera 2005) by means of the management of knowledge within the firm (Easterby-Smith and Prieto 2008). New knowledge and the exploitation of current knowledge facilitate an understanding of a complex and uncertain environment (Zollo and Winter 2002).

## 2.2 *Internal Knowledge Accumulation and Organizational Effectiveness*

The internal knowledge accumulation in the family firm links the bundle of resources and capabilities provided by the family with the development of dynamic family capabilities that permit the continuous development<sup>1</sup> of closer relationships—more family-like—with distributors, which in turn can provide benefits such as insight into changing consumer tastes.

Internal knowledge is manifested in the wisdom and skills that the family members have acquired and developed through education and experience both within and outside of the firm (Chirico 2008). Thus, the form in which the firms create, transfer, and use knowledge has an impact on their performance and skill in competing within an industry (Nonaka 1994; Grant 1996a; Spender 1996). Consistent with Chirico (2008), in family firms, knowledge is better accumulated when the family members value the family workplace relationships within the firm, the commitment and psychological ownership with the firm, as well as in-house training courses and family firm experience, and/or hiring of family executives in the firm. In this manner, the family firm develops a strong organizational culture of continuous improvement and learning in which the family workplace relationships have great weight in the process of continuous improvement, achieving greater levels of organizational effectiveness. Thus, we propose the following hypothesis:

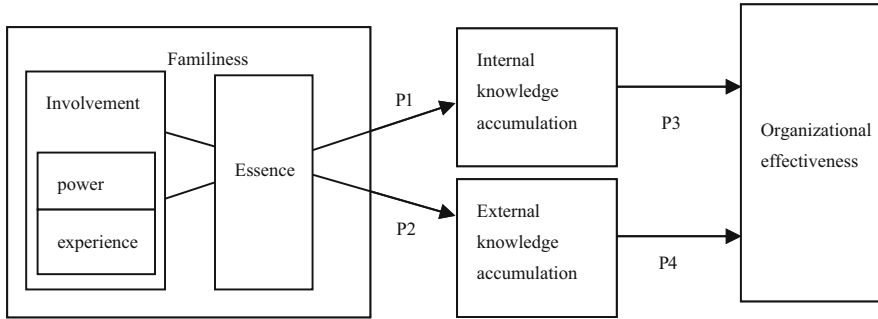
**Proposition 3** The internal accumulation of knowledge has a positive influence on organizational effectiveness in the family firm.

## 2.3 *External Knowledge Accumulation and Organizational Effectiveness*

In regard to external knowledge accumulation, training outside the family firm is a form of learning in which the family members have the opportunity to create new knowledge, combining their tacit knowledge with their explicit knowledge (Nonaka and Takeuchi 1995). This type of training allows family members to acquire new knowledge and develop skills which, when brought to the firm, can be shared and transferred to the other members of the firm (Chirico 2007) and transferred across the generations (Ward 1987; Barach and Ganitsky 1995). Once internalized, this knowledge serves to develop a sense of family identity oriented to develop new strategies, administrative systems, or operating systems in the firm (Ward 1987). Thus, the knowledge acquired outside of the family firm, when shared and transferred over time within the firm, generates positive returns for family firm management (Chirico

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<sup>1</sup>The continuous development incorporates the notion of change and evolution of knowledge and learning over time (Zollo and Winter 2002).



**Fig. 2** Proposed research model and study propositions

2007). Likewise, when the knowledge and experience are acquired by employing the talents of non-family members (specially qualified people) who work for or have relationships with the family firm, it increases the openness and flexibility of the family firm (Ward 1987; Jaffe and Lane 2004).

To summarize, absorbing, combining, and integrating the new external knowledge with that already available in the firm offers new perspectives of sustainability for the firm over the generations (Chirico 2008). Obtaining new external knowledge results in management improvement, fostering family organizational effectiveness. In agreement with these approaches, we propose the following:

**Proposition 4** The accumulation of external knowledge has a positive influence on organizational effectiveness in the family firm.

Figure 2 summarizes the suggested research model and propositions.

### 3 Conclusions

This research offers various contributions to the study of family firms. The first contribution to the field, and consistent with the suggestions of Chirico (2008), is to provide an outline of research with respect to the relation between involvement and essence in the family firm and the process of knowledge accumulation. The second contribution, in agreement with Astrachan (2010), is to provide an improved understanding of how involvement and family essence could promote the generation of resources and capabilities as basic elements of organizational effectiveness, behavior, and performance of the family firm. Another contribution of this work, following Chirico and Salvato (2008), is the incorporation of dynamic capabilities, providing a future discussion about how involvement and essence can contribute to this process in the family firm. These contributions, taken together, provide a better understanding of the behavior, performance, and heterogeneity of the family firm. With respect to the business practices of the family firm, our work provides ideas to the executives and managers as to what aspects condition the firm and what factors promote the

accumulation of knowledge in the firm. We discuss these contributions in detail in the following paragraphs.

Our results could have implications for the managers of the family firms, and therefore it is essential that they be familiar with the mechanisms of knowledge accumulation and the aspects of the firm that foster them; this will permit the managers to create a collaborative environment for the exchange of information and knowledge, especially tacit knowledge, coming from both family members and non-family members. The executives should promote a climate of trust and commitment that facilitates the interaction of the firm members and the family members, providing the necessary incentives that stimulate the accumulation of knowledge in the family firm. Management has a mission to ensure that the different generations consolidate their relationships in the context of the firm; in this way the family members will be able to make the vision and the organizational values their own across the generations, guaranteeing the permanence of the family firm. Thus, and in agreement with Chirico (2008), those strong affective ties—the trust and the closeness of the relationships—will create a sense of belonging to the firm where the firm is part of the individual and the individual is part of the firm.

## 4 Future Lines of Research

This research opens interesting lines for further investigation; studies can be developed to identify the behavior and the impact of the variables of knowledge accumulation over time and capture its dynamic essence as a possible case method. Other possible future research could be directed to evaluate our model in other contexts and cultures, contributing to its mainstreaming and adaptation. In addition, further studies could be devoted to study the possible moderating effect of the components of the involvement, in the relationship between the essence and the accumulation of external knowledge. Finally, the next step in research could evaluate how this accumulated knowledge could be integrated and used as a source of value and continuity; in this sense, it would be interesting to evaluate how socioemotional factors might influence the process of knowledge management and generate dynamic capabilities in the family firm.

## References

- Anderson, R. C., & Reeb, D. M. (2003). Founding-family ownership and firm performance: Evidence from the S&P 500. *The Journal of Finance*, *58*(3), 1301–1327.
- Astrachan, J. H. (2010). Strategy in family business: Toward a multidimensional research agenda. *Journal of Family Business Strategy*, *1*(1), 6–14.
- Astrachan, J. H., Klein, S. B., & Smyrnios, K. X. (2002). The F-PEC scale of family influence: A proposal for solving the family business definition problem. *Family Business Review*, *15*(1), 45–58.

- Barach, J. A., & Ganitsky, J. B. (1995). Successful succession in family business. *Family Business Review*, 8(2), 131–155.
- Basco, R. (2013). The family's effect on family firm performance: A model testing the demographic and essence approaches. *Journal of Family Business Strategy*, 4(1), 42–66.
- Cabrera-Suárez, K., De Saá-Pérez, P., & García-Almeida, D. (2001). The succession process from a resource- and knowledge-based view of the family firm. *Family Business Review*, 14(1), 37–46.
- Carlock, R. S., & Ward, J. L. (2001). *Strategic planning for the family business: Parallel planning to unify the family and business*. Houndmills, New York: Palgrave.
- Cepeda, G., & Vera, D. (2005). Knowledge management and firm performance: Examining the mediating link of dynamic capabilities. In *4th International meeting of the Iberoamerican academy of management*. Lisbon: Portugal.
- Chirico, F. (2007). The accumulation process of knowledge in family firms. *Electronic Journal of Family Business Studies*, 1(1), 62–90.
- Chirico, F. (2008). Knowledge accumulation in family firms: Evidence from four case studies. *International Small Business Journal*, 26(4), 433–462.
- Chirico, F., & Nordqvist, M. (2010). Dynamic capabilities and trans-generational value creation in family firms: The role of organizational culture. *International Small Business Journal*, 28(5), 487–504.
- Chirico, F., & Salvato, C. (2008). Knowledge integration and dynamic organizational adaptation in family firms. *Family Business Review*, 21(2), 169–181.
- Chirico, F., & Salvato, C. (2016). Knowledge internalization and product development in family firms: When relational and affective factors matter. *Entrepreneurship: Theory & Practice*, 40(1), 201–229.
- Chrisman, J. J., Chua, J. H., & Litz, R. A. (2004). Comparing the agency costs of family and non-family firms: Conceptual issues and exploratory evidence. *Entrepreneurship: Theory & Practice*, 28(4), 335–354.
- Chrisman, J. J., Chua, J. H., & Sharma, P. (2005). Trends and directions in the development of a strategic management theory of the family firm. *Entrepreneurship: Theory & Practice*, 29(5), 555–576.
- Chrisman, J. J., Chua, J. H., & Kellermanns, F. (2009). Priorities, resource stocks, and performance in family and nonfamily firms. *Entrepreneurship: Theory & Practice*, 33(3), 739–760.
- Chrisman, J. J., Chua, J. H., Pearson, A. W., & Barnett, T. (2012). Family involvement, family influence, and family-centered non-economic goals in small firms. *Entrepreneurship: Theory & Practice*, 36(2), 267–293.
- Chua, J. H., Chrisman, J. J., & Sharma, P. (1999). Defining the family business by behavior. *Entrepreneurship: Theory & Practice*, 23(4), 19–39.
- Cruz, C. C., Gómez-Mejía, L. R., & Becerra, M. (2010). Perceptions of benevolence and the design of agency contracts: CEO – TMT relationships in family firms. *Academy of Management Journal*, 53(1), 69–89.
- Cunningham, J., Seaman, C., & McGuire, D. (2017). Perceptions of knowledge sharing among small family firm leaders: A structural equation model. *Family Business Review*, 30(2), 160–181.
- Easterby-Smith, M., & Prieto, I. M. (2008). Dynamic capabilities and knowledge management: An integrative role for learning? *British Journal of Management*, 19(3), 235–249.
- Eddleston, K. A., Kellermanns, F. W., & Sarathy, R. (2008). Resource configuration in family firms: Linking resources, strategic planning and technological opportunities to performance. *Journal of Management Studies*, 45(1), 26–50.
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*, 21(10–11), 1105–1121.
- Feranita, F., Kotlar, J., & De Massis, A. (2017). Collaborative innovation in family firms: Past research, current debates and agenda for future research. *Journal of Family Business Strategy*, 8(3), 137–156.

- Fiegenger, M. K., Brown, B. M., Prince, R. A., & File, K. M. (1996). Passing on strategic vision-favored modes of successor preparation by CEOs of family and nonfamily firms. *Journal of Small Business Management*, 34(3), 15–26.
- Gersick, K. E., Davis, J. A., McCollom, M., & Lansberg, I. (1997). *Generation to generation life cycles of the family business*. Boston: Harvard Business School Press.
- Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of Management Information Systems*, 18(1), 185–214.
- Gómez-Mejía, L. R., Haynes, K. T., Núñez-Nickel, M., Jacobson, K. J. L., & Moyano-Fuentes, J. (2007). Socioemotional wealth and business risks in family-controlled firms: Evidence from Spanish olive oil mills. *Administrative Science Quarterly*, 52(1), 106–137.
- Gómez-Mejía, L. R., Cruz, C., Berrone, P., & De Castro, J. (2011a). The bind that ties: Socioemotional wealth preservation in family firms. *The Academy of Management Annals*, 5(1), 653–707.
- Gómez-Mejía, L., Hoskisson, R., Makri, M., Sirmon, D., & Campbell, J. (2011b). *Innovation and the preservation of socioemotional wealth: The paradox of R&D investment in family controlled high technology firms*. Unpublished paper, management department, Texas A&M University, USA.
- Grant, R. M. (1996a). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17, 109–122.
- Grant, R. M. (1996b). Prospering in dynamically-competitive environments: Organizational capability as knowledge integration. *Organization Science*, 7(4), 375–387.
- Grote, J. (2003). Conflicting generations: A new theory of family business rivalry. *Family Business Review*, 16(2), 113–124.
- Habbershon, T. G., & Williams, M. L. (1999). A resource-based framework for assessing the strategic advantages of family firms. *Family Business Review*, 12(1), 1–25.
- Habbershon, T. G., Williams, M. L., & MacMillan, I. (2003). A unified systems perspective of family firm performance. *Journal of Business Venturing*, 18(4), 451–465.
- Helfat, C. E., Finkelstein, S., Mitchell, W., Peteraf, M. A., Sing, H., Teece, D. J., & Winter, S. G. (2007). *Dynamic capabilities: Understanding strategic change in organizations*. New York, NY/Malden, MA: Wiley/Blackwell.
- Jaffe, D. T., & Lane, S. H. (2004). Sustaining a family dynasty: Key issues facing complex multigenerational business and investment-owning families. *Family Business Review*, 17(1), 81–98.
- Kellermanns, F. W., & Eddleston, K. A. (2004). Feuding families: When conflict does a family firm good. *Entrepreneurship: Theory & Practice*, 28(3), 209–228.
- Kets de Vries, M. F. R. (1993). The dynamics of family-controlled firms: The good and the bad news. *Organizational Dynamics*, 21(3), 59–71.
- Klein, S. B., Astrachan, J. H., & Smyrnios, K. X. (2005). The F-PEC scale of family influence: Construction, validation, and further implication for theory. *Entrepreneurship: Theory & Practice*, 29(3), 321–339.
- Kotey, B., & Folker, C. (2007). Employee training in SMEs: Effect of size and firm type—Family and non-family. *Journal of Small Business Management*, 45(2), 214–238.
- Kusunoki, K., Nonaka, I., & Nagata, A. (1998). Organizational capabilities in product development of Japanese firms: A conceptual framework and empirical findings. *Organization Science*, 9(6), 699–718.
- Litz, R. A. (1995). The family business: Toward definitional clarity. *Family Business Review*, 8(2), 71–81.
- Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy Management Review*, 23(2), 242–266.
- Nielsen, A. P. (2006). Understanding dynamic capabilities through knowledge management. *Journal of Knowledge Management*, 10(4), 59–71.
- Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization Science*, 5(1), 14–37.



- Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. Oxford: Oxford University Press.
- Nonaka, I., Toyama, R., & Nagata, A. (2000). A firm as a knowledge-creating entity: A new perspective on the theory of the firm. *Industrial and Corporate Change*, 9(1), 1–20.
- Pittino, D., Martínez, A. B., Chirico, F., & Galván, R. S. (2018). Psychological ownership, knowledge sharing and entrepreneurial orientation in family firms: The moderating role of governance heterogeneity. *Journal of Business Research*, 84, 312–326.
- Sorenson, R. L. (2000). The contribution of leadership style and practices to family and business success. *Family Business Review*, 13(3), 183–200.
- Spender, J.-C. (1996). Making knowledge the basis of a dynamic theory of the firm. *Strategic Management Journal*, 17(Winter Special Issue), 45–62.
- Tagiuri, R., & Davis, J. (1996). Bivalent attributes of the family firm. *Family Business Review*, 9(2), 199–208.
- Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350.
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533.
- Thomas, J. (2001). Effective processes in the family business to provide for ownership transfer or exit. In *FBN 12th annual world conference. The role of family business: Research forum proceedings* (pp. 332–348). Rome: FBN.
- Ward, J. L. (1987). *Keeping the family business healthy: How to plan for continuing growth, profitability, and family leadership*. San Francisco: Jossey Bass.
- Woodfield, P., & Husted, K. (2017). Intergenerational knowledge sharing in family firms: Case-based evidence from the New Zealand wine industry. *Journal of Family Business Strategy*, 8(1), 57–69.
- Zheng, W., Yang, B., & McLean, G. N. (2010). Linking organizational culture, structure, strategy, and organizational effectiveness: Mediating role of knowledge management. *Journal of Business Research*, 63(7), 763–771.
- Zollo, M., & Winter, S. G. (2002). Deliberate learning and the evolution of dynamic capabilities. *Organization Science*, 13(3), 339–351.

# Who's Winning the "Survivor" Race? Gazelle or Non-Gazelle Startups

Dina Pereira, João Leitão, and Rui Baptista

**Abstract** High-growth firms are of particular interest for academics and policymakers due to their serious contributions to the economy, job market, and knowledge creation. Previous studies have majorly focused on firm growth rates, their persistence over time, and their determinants. Nevertheless, open research windows still remain in predicting what sort of companies will grow or even survive and in understanding the inconsistency of high-growth levels. The complexity of the relationship macroeconomic environment, high-growth regimes and firm capabilities deserves further research efforts. Here we will focus on the microeconomic determinants of startups' survival, namely, the founder's attributes and the firm's characteristics and capabilities, and their relation with business survival, contrasting gazelle and non-gazelle startups. To address this, we use a Cox proportional hazard model, for a sample of 4919 firms, collected from the Kauffman Foundation Survey. Results reveal that the main entrepreneur and entrepreneurial-level determinants of firm survival are the founders' college education, IP activity, firms' small- and medium-size, and the gazelle condition impact on the firms' chances of survival. Taken these all together and including the moderating effect of startup capitalization, results point to the fact that owners' work experience and the small- and medium-sized companies as well as the companies' R&D activities moderated by capitalization access increases the chances of firm survival. Crisis spurs firms' exit, nonetheless startups pursuing a competitive advantage strategy and the moderating effect of startup capital on their internal R&D activities increase the chances of survival.

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**Keywords** Crisis · Gazelle startups · Micro-determinants · Startup capitalization · Survival

## 1 Introduction

Gazelle firms are understood as key agents in the role model of entrepreneurial economy based on knowledge. They are characterized by high-growth rates, turbulence, and fast change, also being important “new job-creators”. Moreover they are of particular interest for academics and policymakers as they present a crucial contribution to the economy, the job market, and knowledge creation (Coad et al. 2014).

These firms are responsible for most net new job generation. They are fast-growing and have an important role in the current economy, creating a lever for economic growth and real convergence. Understanding what drives the sustainable growth of such firms and predicting the determinants that can most affect their performance and survival in order to prevent exit over many years and design sustainable policies is therefore essential.

Much work has been done on the analysis of firm growth determinants, regimens, rates, and persistence (Bottazzi and Secchi 2006; Coad 2007; Acs and Mueller 2008; Lee 2010; Parker et al. 2010; Coad and Hözl 2011). Research on high-growth firms covers a wide array of items, namely, size (Delmar 1997; Delmar and Davidsson 1998; Weinzimmer et al. 1998; Delmar et al. 2003; Shepherd and Wiklund 2009) and age (Delmar et al. 2003; Haltiwanger et al. 2013); belongs to an enterprise group (Delmar et al. 2003); is family-owned (Bjuggren et al. 2013); and belongs to an industry sector (Delmar et al. 2003; Davidsson and Delmar 2003, Davidsson et al. 2006; Halabisky et al. 2006; Acs et al. 2008), region location (Stam 2005; Acs and Mueller 2008), or country location (Schreyer 2000; Bravo-Biosca 2010), among others.

Several scholars conclude that the majority of entrepreneurs fail or exit during the first 5 years of activity (Parsa et al. 2005; Verhoeven et al. 2005; Hayward et al. 2006; Meijaard et al. 2007; Bangma and Snel 2009). For instance, in the US, 34% of new ventures exit after 2 years, 50% after 4 years, and 60% after 6 years (Hayward et al. 2006). Another example is the case of the Netherlands where almost 50% of new ventures do not survive during the first 5 years (Meijaard et al. 2007; Bangma and Snel 2009). In addition, van Gelderen et al. (2006) analyzed the explanatory factors of creating and making a business to survive. They based their study on Gartner’s (1985) framework of new venture creation which concludes that startup efforts are influenced by a set of characteristics of the founders, the firm, the environment surrounding the new venture, and the process of creating a new venture. They point to the perceived risk of the market acting as a predictor of starting the firm versus exiting and simply abandoning the startup creation effort.

Stam and Wennberg (2009) studied the effects of initial R&D on firm growth, defending that this can stimulate new product development at a later stage in the lifecycle of high-tech firms. Conversely, R&D is not supposed to affect the growth

rate of new low-tech firms, only being a stimulus to a limited group of new high-tech and high-growth firms, which are extremely important when considering innovation and entrepreneurship policies.

Recent studies on firm performance, focusing on high-growth firms, state that a set of determinants play a central role in their survival, such as the capacity to adapt quickly in the turbulent environment of fast technological change where "gazelles" operate and develop exit strategies adjusted to this capacity, opting for routes like mergers and acquisitions (M&A), joint-ventures, etc., instead of closing (Klepper and Simons 2005; Wieser 2005; Coad and Rao 2008). In addition, Baptista and Karaöz (2011) show that the process of replacing exiting firms with entrants is a factor of turbulence in high-growth markets. In turn, the incumbents' displacement by new entrants is understood as the main selection force when focusing on declining markets.

In accordance with Coad and Timmermans (2014), there is much room for researching on gazelles under a management perspective as it is still needed to understand in more detail the microeconomic determinants of sustainable high growth. It is important to unveil determinants related with the role played by the entrepreneur, industry characteristics, organizational change during high-growth periods, management styles, firm strategies, and others of major interest for a longer and sustainable high growth.

This chapter makes an attempt to assess if gazelle startups live longer than non-gazelle startups, by analyzing the microeconomic determinants responsible for such scenario and by using an estimation of predicted survival rates of US startup firms under Cox proportional hazard models.

The importance of studying the predictors of survival and growth, as well as understanding what determines firm survival rates, has been a topic of analysis for researchers such as Stuart et al. (1999), Baum et al. (2000), Cohen et al. (2002), Gans and Stern (2003), Gulati and Higgins (2003), Ziedonis (2004), Audretsch and Lehmann (2005), Colombo and Grilli (2005), Cefis and Marsili (2007), Mann and Sager (2007), Srinivasan et al. (2008), Wennberg et al. (2010), Grilli (2011), and Medrano (2012), among others.

In this context, and in line with the objectives of the present work, authors like Stuart et al. (1999), Baum et al. (2000), Cohen et al. (2002), Gans and Stern (2003), Gulati and Higgins (2003), Ziedonis (2004), Audretsch and Lehmann (2005), Cefis and Marsili (2007), Srinivasan et al. (2008), and Medrano (2012) analyzed the determinant factors for survival associated with firms' characteristics, namely, the firms' IPR portfolio and R&D intensity.

Colombo and Grilli (2005) and Grilli (2011) point out that the entrepreneur's previous professional experience is related to the survival and exit rates and with the option of exiting through merger and acquisition.

This chapter attempts to fill the caveat found in the literature, by estimating the predictors of survival and growth of "gazelle" and "non-gazelle" firms, in order to assess the role played by different microeconomic determinants of growth, namely, at the entrepreneur (e.g., founder' attributes) level, the entrepreneurial unit (e.g., firm's characteristics, innovation strategies) level, and the industry sector level.

Using a Cox proportional hazard model, we estimate the hazard ratios of the included firm and founder/owner/firm control variables, based on a sample of 4919 US startups created in 2004 and tracked by the Kauffman Foundation in the subsequent 7 years.

The empirical evidences now obtained reveal that the main microeconomic determinants of firm survival are owners' prior work experience; the small and medium size of the firms; firms with R&D activities; the moderating effect of startup capitalization on the small- and medium-sized companies; as well as on the firms having R&D activities and pursuing a competitive advantage orientation.

Startups with R&D dedicated activities and higher startup capitalization have higher survival ratios than others. Concerning the 2007–2008 financial crisis period, our results suggest that firms are more likely to exit, than in other periods. Notwithstanding, startups that pursue a competitive advantage strategy and denote a higher access to startup capital moderated by their internal R&D activities are not so exposed at the hazard of exiting.

The remainder of chapter is organized as follows: Sect 2 develops the theoretical underpinnings, drawing on the literature about entrepreneur(ial) determinants of exit; Sect. 3 presents the empirical approach and discusses the results; and lastly, Sect. 4 concludes and provides policy implications as well as guidelines for entrepreneurs and practitioners in the framework of technological entrepreneurship, namely, founders/owners or managers of gazelle-firms, which are considered as innovative and high-growth entrepreneurial units.

## 2 Microeconomic Determinants of Firm Growth

### 2.1 *Entrepreneur Level*

Different studies concluded for a positive relationship between entrepreneurs' attributes related with their education and experience and the firms' performance (e.g., Rae and Carswell 2001; Mosey and Wright 2007; Shrader and Siegel 2007; Serneels 2008). Marvel and Lumpkin (2007) analyzed the effect of education on firms' innovation radicalness, concluding for a positive connection. Other studies ratified the positive relationship between founders' higher levels of education and firm innovativeness (De Winne and Sels 2010; Sullivan and Marvel 2011; Ganotakis 2012; Tang and Murphy 2012; Robson et al. 2012; Rauch and Rijdsdijk 2013; Gries and Van Dung 2014).

Marvel et al. (2014) argue that it's important to achieve equilibrium among knowledge, skills, and abilities (KSAs), in order to create and spur startups growth.

Highly educated founders, as stated hereafter, are more prepared to absorb and exploit opportunities, and these can happen along work experiences, both as prior experiences as employees and as business owners. Several scholars defend a positive and significant relationship between the founders' previous entrepreneurial

experiences and the firms' survival rates, which decreases the probability of exiting and increases the chances of success (Taylor 1999; Ucbasaran et al. 2003; Politis 2005).

Accordingly, repeat entrepreneurs are more likely to have more personal financial resources to invest or reinvest, greater access to external financial support, and are more able to create new businesses with higher growth potential (Colombo and Grilli 2005). In the view of Tyebjee and Bruno (1984), experienced entrepreneurs are more able to develop high-performance ventures and to plan and also to delineate and implement more efficient exit strategies.

The exit process can also be approached as a learning process that will support the creation of a new firm and subsequent growth, reflecting the concept of entrepreneurial engagement. This concept relates to a process including diverse levels of engagement, such as intentions to establish a firm or startup activity (Grilo and Thurik 2005, 2008).

Westhead et al. (2005) argue that serial entrepreneurs have the capacity to enter and exit repeatedly, acting as key drivers for the economy and industry, due to their previous experience and external learning spillovers. The authors also suggest that serial entrepreneurs are more prone to enter a new business after exiting another due to additional skills and knowledge achieved in previous experiences.

This could be connected with the dynamic capabilities perspective presented in Teece et al. (1990, 1997), Teece and Pisano (1994), and Teece (2007, 2009, 2010a, 2014) that goes beyond a financial-statement view of assets to emphasize the "soft assets" that management needs to make a rational use of both internal and external resources to the firm. This type of assets, in our view, is dependent on the entrepreneur's background, characteristics, and experiences.

In this same vein, other authors (Wagner 2003; Schutjens and Stam 2006; Stam et al. 2008; Amaral et al. 2011) state that more educated founders, and in the majority of times males, are more prone to reengage in the entrepreneurial process after closing a business, being also more capable of using these prior experiences in favor of the new venture's success. Braguinsky et al. (2012) analyzed high-tech startups and concluded for the positive effect of pre-entry work experience on recognition and exploitation of a new business opportunity. Nevertheless, they mention other factors that impact on the new firm performance, such as the innate ability of the entrepreneurs, as well as the age effect, since younger entrepreneurs are positively related with the entrepreneurial earnings.

Accordingly, employees who leave their jobs and transform into founders denote an increased performance comparing to other startups (Phillips 2002; Agarwal et al. 2004; Klepper and Sleeper 2005; Franco and Filson 2006). This happens because these new entrepreneurs acquire managerial experience at their previous employers, additional technical and regulatory knowledge and personal networks (Agarwal et al. 2004; Ensley et al. 2002; Chatterji 2009; Dencker et al. 2009), also denoting higher human capital (Klepper 2007).

Moreover, these new founders acquire extra qualifications and social networks and experience valuable an easier access to finance needed to starting up, including banks and venture capitalists, in early stage phases and during growth and maturity

(Zott and Huy 2007; Painter 2010; Jayawarna et al. 2011). Consequently, these quality employees who create their own ventures preserve social ties with their prior employers and coworkers, being possible to extract value from these ties and contribute to the new firm growth (Nyberg and Wright 2015). Entrepreneurs, with experience gained in incumbent firms, have higher capabilities to extract the most of new challenges (Klepper 2002), as they have accumulated work experience and industry background being more capable of detecting business opportunities and achieving the needed resources to grow their companies (Colombo et al. 2004).

Prior experience in the same industry of the new firm is considered to act favorably when starting up (Helfat and Lieberman 2002), as the founders' set of industry knowledge and industry networks provide important management and technical resources to these new firms (Van Gelderen et al. 2006). The same results were found by Baptista et al. (2014) who state that prior experience just before starting up spurs the new venture performance by benefiting from the industry-specific human capital.

Preexisting capabilities acquired in related industries give new firms abilities and skills to deal with the entering in the new industry (Qian et al. 2012) as well as argue that professional background in the field is important for. Moreover, these founders become more able to explore and benefit from the organizational innovation of the company (Huang et al. 2012), impacting on the firms' innovation outcomes (Robson et al. 2012) and more capable of reconfiguring and adapting to the changing environment by reducing adaptability constraints (Carroll and Hannan 2000; Chen et al. 2012).

Previous experience in different activity sectors from the new founded company can also impact positively on the new ventures' success as it can spur innovativeness and explore new routines and processes (Levitt and March 1988; Phillips 2002; Beckman 2006). This is the case of Tesla, a new venture that creates synergies from an electrical engineer, a computer scientist, and an energy engineer. In this line of reasoning, we propose:

**Proposition 1** The longer the previous entrepreneurs' working experiences the higher the chances of survival.

The founders' entrepreneurial experience is also important for explaining the new venture's performance, since habitual or repeated entrepreneurs, i.e., founders who have created at least one company in the past, or own more than one firm (portfolio entrepreneur), have a higher entrepreneurial human capital that will have a positive effect on the new firm's success (Ücbasaran et al. 2003; Stam et al. 2008). The same is defended by McGrath and MacMillan (2000) who argue that these founders accumulate management and technical skills, market, and industry/sector knowledge, business networking of major importance for the firm growth (Sullivan and Marvel 2011).

Furthermore, new ventures founded by talented, self-employed, entrepreneurs impact positively on their performance, and specifically on high-tech startups (Tyejee and Bruno 1984; Evans et al. 1989; Taylor 1999; Hamilton 2000; Politis 2005; Åstebro et al. 2011). The fact that repeat entrepreneurs tend to own additional

financial resources to invest or reinvest and more access to external financial support can impact on the new businesses' growth potential (Colombo and Grilli 2005).

An entrepreneur who has acquired experience by owning another company in the past may present a specific tacit knowledge related with conducting the business (Cooper et al. 1989) or having more managerial experience to organize the new company and drive it to grow and succeed (Shane 2000; Ganotakis 2012). In the same line of reasoning, Landier and Thesmar (2009) state that repeat entrepreneurs, either sequential or portfolio, with prior business experience, are more optimistic than rookie entrepreneurs, although the first ones by making a break between each venture creation can cause a depreciation in their specific human capital which may have a negative effect on the new venture's success (Amaral et al. 2011).

Conversely, in a study applied to a sample of Portuguese firms, Baptista et al. (2012), conclude that founders' prior industry and managerial experience impact favorably on sales performance of the new ventures.

**Proposition 2** The previous entrepreneurs' experience as business owners moderated by the effect of this having been in the target industry of the new venture increases the likelihood of firm survival.

The processes of creating and closing firms have important effects both on industry and economy, being those determined by several factors founded on the individual characteristics of the entrepreneur (Hessels et al. 2011).

According to DeTienne and Cardon (2008), the set of decisions made by high-tech firms depend upon several personal traits of the founders, namely, their intentions, motivations, and educational backgrounds. In this sense, creation, exit decisions, and strategies adopted by entrepreneurs are influenced by their cognition and knowledge.

The educational background of the entrepreneur has to do not only with his qualifications but also with the entrepreneurial education he achieved, and if he has a deeper understanding of firm processes, as this will affect the decisions and strategies developed. Halldin (2012) also advocates that employees' characteristics determine firms' survival rates, especially regarding their educational backgrounds.

Based upon Becker's "Human Capital Theory" (Becker 1964), scholars focus on the entrepreneurs' decisions to create a business and to make it grow which depend on their resources, skills, and capacities.

The Penrose an *Theory of the Growth of the Firm* (1959), which settled the basis for the resource-based theory of the firm (Barney 1991), claimed that the human capital of the firm is responsible for firm creation, success, and diversification, either from the firms' founders or the new joiners. Later, the knowledge-based view expands the resource-based view of the firm, which defends knowledge as the most important firm's resource that adds sustainable competitive advantage (Wiklund and Shepherd 2003).

Markman and Baron (2003) suggest that founders' knowledge sets on the new ventures' field is of extreme importance to be more successful. Dimov and Shepherd (2005) points out that having wide knowledge on markets and technology, by means of larger education stocks, has a positive effect on the opportunities' development.



Baptista et al. (2012) analyzed 25,480 Portuguese knowledge-based firms that started their activity after 1991 and outlined an important correlation between highly educated business owners and startups' performance. Later on, Baptista et al. (2014) analyzed the effects of a set of different types of entrepreneurial human capital related with the founders' backgrounds, on startups' early years. Their results show that founders with more stocks of innovative capabilities, marketing, finance, and organizational routines will have an improved learning capability, thus being more prone to achieve success.

The founders' educational background entails the entrepreneurs with increased capacities to assimilate and exploit to its utmost work experiences and industry-specific experiences, achieving higher success (Brüderl et al. 1992). Moreover, Van der Sluis et al. (2005) conclude that formal educational has a positive and significant effect on the entrepreneurial pathway.

In the same vein, Kato et al. (2015) defend that the education of founders is crucial to increase firm innovation, namely, by providing the entrepreneur with skills to be able to exploit it, as their education provides them tools to detect, absorb, and exploit external flows of knowledge (Shane 2000), as well as augmented learning aptitudes and organizational skills (Grant 1996). The authors point to the importance of R&D investment to overcome the lack of resources and business experience which is related with the educational background of the founder. Additionally, more educated founders were found to be more prone to raise external capital and specifically capital targeted at R&D.

De Clercq and Arenius (2006), Coleman (2007), Shrader and Siegel (2007), Kessler and Frank (2009), Serneels (2008), and Ucbasaran et al. (2008) recognize that human capital, in the form of education and organizational experience, impacts on opportunity recognition, firms' financial performance, growth, and innovation.

Ucbasaran et al. (2008) address another important outcome that founders' education can bring, specifically the set of important informal contacts that more educated entrepreneurs acquire while having their academic routes that are able to impact positively on the firm's growth. Furthermore, the authors also conclude that the more educated entrepreneurs are, the higher incomes they will obtain, being these important to support the new venture's initial funding.

Gimmon and Levie (2010) in an analysis of 193 startups created in the scope of the Israeli Technology Incubator Program (1991–2001) suggest a positive relationship between the firm survival and business and managerial and general technology expertise. They also argue that founders' academic status affects positively on external investment inflow and thus survival and performance. Thus, being our theoretical focus the development of some propositions that will guide our empirical investigations, we propose the following:

**Proposition 3** The entrepreneurs' college education influences the likelihood of firm survival.

**Proposition 4** New ventures' founders' college education has a moderator effect on obtaining higher startup capitalization, thus being more prone to survive.

## 2.2 *Entrepreneurial Unit Level*

Following the pioneering work of Birch et al. (1995), a gazelle firm is an entrepreneurial unit that achieves a minimum of 20% sales growth each year over an interval, starting from a base-year revenue of at least USD 100,000. For the authors, this kind of firm is neither small nor large. They tend to be evenly balanced, allowing them to produce great innovation and rapid job growth. Delmar et al. (2003) proposed an alternative "gazelle" concept by developing 19 measures associated with growth and sources of variability, covering sales, employment and profitability, or subjective assessments by the owners.

Another important issue in defining gazelles concerns fast growth. Regarding sales, the norm is to consider 20–30% per annum as a threshold. As for time, some studies use a 3-year period as a reference; others consider the importance of a 10-year life span. Furthermore, it is important to consider whether fast growth will be achieved every year or if it can fluctuate and so consider the mean for the period under consideration (Delmar et al. 2003; Garnsey et al. 2006). On average, these firms grow very fast in their first years, followed by decline or by a considerable deceleration of growth rates (Hull and Arnold 2008).

According to Ahmad (2006), the OECD defines gazelles as young (less than 5 years old), high-growth firms, characterized by an average employment growth rate above 20% per year over a 3-year period and with ten or more employees at the start of the period.

Henreckson and Johansson (2010) argue that gazelles are responsible for generating the majority of new jobs, being on average younger and smaller than other firms. The authors also stress that the fact that these firms are young is more determinant than their size for new job creation and rapid growth.

An alternative taxonomy on growth patterns is proposed by Nightingale and Coad (2013), considering muppets (marginal undersized poor performers) and gazelles (high-impact firms). The authors characterize the muppet firms, opposed to gazelles, as firms with marginal ambition or capability to grow and innovate, denoting high exit, being undersized as they don't have the needed scale to perform and compete with incumbents in their sectors and industries.

Littunen and Virtanen (2006) performed an analysis to new Finnish firms between 1990 and 1997, both growers and non-growers, to understand how these firms grow and which are the factors involved in their performance. To do so they focused on survivor firms (86), being half growing ventures and the other half non-growing. Moreover, their intention was to compare the ventures in the growth category with the other surviving ones, in order to detect differences and similarities in the relative growth of small new firms, including but not limiting to gazelles. Their results suggest that factors like experience (age), firm location, training, and motivation are correlated with the growing firms.

Of particular interest is the analysis of the relationship between firm growth, and more specifically, gazelle firms' growth, and their profitability. By using a sample of 964 Danish gazelle firms, Senderovitz et al. (2012) conclude for a positive

relationship, which is stronger for those which operate under a broad market strategy rather than those who undertake a niche strategy.

Parker et al. (2010) stress the importance of understanding the consistency of growth, if sales growth should be organic or achieved by acquiring other businesses. The authors estimate a model of firm growth in which they evaluate a mix of firm growth strategies in medium-sized firms, by using survival and growth to explain firms' performance. One of the firm growth strategies tested is related with innovation and technology, more specifically with the development and introduction of new products and with having a R&D manager responsible for these developments. Results show that for gazelles that have developed new products to introduce into the market after 1996 survived less and denoted lower likelihood of being acquired. This result maybe related with the high risk and volatility associated with new product development. Furthermore, the authors conclude that the high grower firms were mostly non-manufacturers. Several scholars (Dunne et al. 1989; Audretsch and Mahmood 1994; Mata and Portugal 1994; Mitchell 1994; Haverman 1995; Sharma and Kesner 1996) defended that firm size is also fundamental for companies to pursue a growth strategy. They argued that larger firms tend to have higher survival rates than their smaller counterparts, due to the efficient scale needed to operate, increased access to funds, and also a larger capacity to diversify and differentiate the managerial ability.

Colombelli et al. (2014) investigate the effects of gazelle firms that follow exploration or exploitation strategies targeted at knowledge creation, by focusing on 335 active companies listed on the main European financial market, in order to accelerate the pace of innovation and growth. The authors defend that growth in gazelle firms is related with exploration based on familiar technology, being high-growth firms fundamental for technological knowledge generation.

Acs et al. (2008) argue that gazelles tend to increase their productivity very fast after entry due to their reduced and flexible size and specific characteristics. These firms are able to challenge existing one and to foster competition with other established firms. Furthermore, they have lower exit rates. Nevertheless, being a gazelle firm is a temporary condition in the firm's lifecycle, as explained by Hölzl (2009), due to the patterns these firms follow, since some settle down to remain SMEs, while others become large firms, and others fail and exit.

According to Klepper and Simons (2005), gazelles denote a fast growth rate and, in the presence of shakeouts typical of growing industries, instead of closing down tend to activate the mergers and acquisitions option. Gazelles are considered to be innovative in a Schumpeterian way since they create new markets and jobs while destroying others. These firms tend to replace incumbent firms using competitive advantage in the form of organizational and technological innovation.

Hereby we propose:

**Proposition 5** The new venture's positioning in a strategy targeted at competitive advantage impacts positively on firm survival, especially for gazelles.

Notwithstanding, authors such as Wieser (2005) or Coad and Rao (2008) argue that innovation plays a key role in these high-flyer firms. Gazelles tend to be more productive in generating innovation and also grow faster than non-innovators.

The relationship between firm lifecycle and innovation intensity is relevant for explaining exit rates (Klepper 1996, 1997; Medrano 2012). At the first stage, the exploration phase, the intensiveness of product innovation is extremely important. At the second, growth stage, the risk of failure is higher, since it is associated with higher market growth rates and lower product innovation. At the third stage, maturity phase, market entry is rarer, market position is stable, and process innovation is of vital importance.

Cefis and Marsili (2011) suggest that in low-tech firms, innovation can be considered an advantage in order to maintain market positioning, regarding the capacity to change and improve production processes. Young firms that are unable to innovate or have low production costs are extremely exposed to newness and more likely to fail. On the contrary, in high-tech firms, innovation only gives access to a fast race with incumbent firms and not the possibility of securing their position or achieving success. For these firms, concentrating on radical innovations, rather than only on incremental innovations, brings a competitive advantage regarding differentiation from competitors.

According with Hsu (2004), Hochberg et al. (2007), and Hallen (2008), each patent application filed by new firms increases the attraction of initial funding from prominent venture capitalists. Moreover, the ownership of a large patent portfolio increases the value of liquidity when exiting via an initial public offering (IPO), especially in the case of the biotechnology industry (Stuart et al. 1999; Baum et al. 2000; Gulati and Higgins 2003). Firms with previous successful IPO experiences are more likely to undergo more successful IPO exits in new ventures than first time entrepreneurs or founders with previous experience of failure.

Ownership of patents and other intellectual property rights (IPRs) give the inventor additional bargaining power when transferring or selling them to third parties, improving the chances of the firm's successful survival (Cohen et al. 2002; Ziedonis 2004). As so, patents are important tools to convey crucial information to external investors regarding the research stream of the startup (Long 2002). This is consistent with the perspective of Hallen (2008), who confirms the importance for growth of the firm having such internal IPRs in contrast with others needing to acquire external knowledge assets.

In the view of Hsu (2007), the entrepreneurial process can also be influenced by the intangible assets owned by the entrepreneur. In this sense, patents enable the entrepreneur to acquire financial resources over the different stages of the firm's lifecycle, including the exit stage.

Srinivasan et al. (2008) argue that the greater the diversification of the firm's portfolio combined with more patents and trademarks, the longer it survives. In this vein, increasing the diversification of new firms' product-market portfolios (either in patents or trademarks) denotes that a firm is undertaking a leveraged innovation strategy, in order to pursue a sustainable survival and development.

Buddelmeyer et al. (2010) state that although firms compete by developing new technologies, innovation can bring serious risks and thus increase the likelihood of non-survival. Recent studies focused on the determinant and positive effect of firms' innovative behavior on survival rates (for instance, the study by Cantner et al. 2011, which analyzed the evolution of the innovative performance of German automobile industry) and the favorable impact of high-quality patents (measured through forward citations and international patents filed) on the survival rate of US Internet-based and software firms between 1998 and 2003 (Wagner and Cockburn 2010).

Medrano (2012) analyzes the importance of innovation and age in firm survival, using information on high-quality patents in laser source technology and patents owned in co-authorship with university inventors. The same author concludes that high-quality patents (measured by the number of forward citations) show a positive and significant relationship with firm survival. Moreover, new firms that start without inherited innovative capabilities are supposed to compensate for this lack of appropriate pre-entry experience with investment in high-quality innovation. The study also finds that co-authorship with university inventors is not crucial for firm survival, since only a small percentage of them are active source producers for firms.

Coleman et al. (2013) focused on data from new firms created in 2004, from KFS, to analyze the predictors of firm survival. Based upon the resource-based view, the authors focus on the impact of tangible and intangible resources on startups' survival, contrasting service, and non-service firms. They outline the importance of education, work and life experience on firm survival, as well as an adequate startup financial capital. Results also stress the importance of IP rights, which reduces the likelihood of non-service firms' exit, specifically via merger and acquisition.

As so, we propose the following:

**Proposition 6** The new ventures' IPRs portfolio impacts positively on firm survival.

The existence and amount of initial financial capital is of extreme importance for firms' survival (Cooper et al. 1994; Holtz-Eakin et al. 1994; Headd 2001; Lee and Zhang 2011). The importance of having such capital resides on the possibilities of firms to finance their activities for longer periods as well as to search for adequate additional sources, as it supports the existence of liquidity constraints. Interestingly, Lee and Zhang (2011) analyzed the impact of different types of capital on survival and concluded that having loans is associated with higher survival likelihood. On the other side, equity investments decrease the likelihood of startup longevity.

Additionally, firms' survival has been explained by several scholars by means of accessing additional sources of capital (Brüderl et al. 1992; Liao et al. 2004; Parker and Belghitar 2006). Caves (1998) also stressed the importance of having higher financial capital and expectations and thus survival. Firm's with higher amounts of startup capital have higher expectations and tend to survive longer.

**Proposition 7** New ventures' capacities for obtaining higher startup capitalization enable them to survive.

**Proposition 8** New ventures' access to higher startup capitalization moderates the effects of firms and owners attributes improving the chances of survival.

The financial crisis of 2007–2009 brought serious problems to the firms' access to finance, in terms of difficulties to obtain loans, the so-called credit crunch (Cowling et al. 2012), considering that 57% of debt funding for US small businesses comes from banks, in accordance with the 2003 Survey of Small Business Finance (SSBF). Here, we will use the crisis effect to control for the impact of new ventures' ease of access to capitalization during crisis times and normal times, on firm survival and growth.

In the line posed by Filippetti and Archibugi (2011), obtaining bank lending is still difficult, especially for smaller firms, fact that restrained the economic recuperation at international level. Having access to financial capital is of major importance for innovative firms, especially small new ventures, as frequently they need external resources to exploit such innovations (Beck and Demirguc-Kunt 2006; Schneider and Veugelers 2010). However, for these type of new ventures, the access to finance is more difficult to achieve, as defended by Schneider and Veugelers (2010), Hutton and Lee (2012), Mason (2013), and Mina et al. (2013).

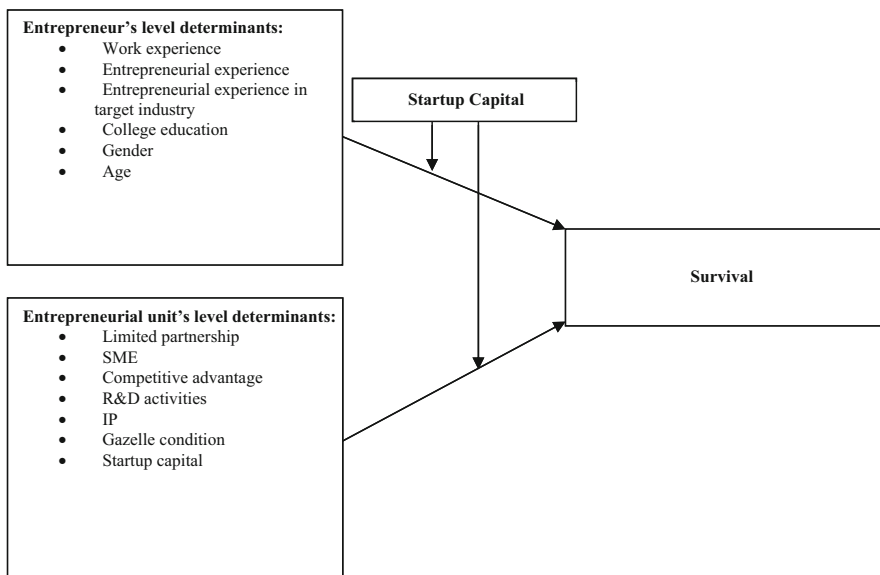
Ventures with an innovation strategy, by facing higher risks and volatility, see the granting of credit by banks more difficult. Moreover, the IPR portfolio is hard to value and thus to use as an asset for obtaining credit. Albeit the difficulties in granting access to external finance in the context of the economic crisis, there is plenty of room for studies on how the "credit crunch" has a negative effect on innovative ventures' access to finance. For instance, Paunov (2012) argues that during crisis innovation investments were reduced, with the exception of firms with access to important public financial support which continued to invest in their innovation projects during the crisis.

**Proposition 9** Financial crisis improves the likelihood of startups' non-survival, being gazelles more prone to avoid exit.

### 3 Model and Estimation Method

#### 3.1 *The Conceptual Model*

In order to focus on the microeconomic determinants of gazelles' sustained high growth and survival, this chapter intends to analyze, on one hand, the entrepreneur level through founder/owner attributes, such as work experience, entrepreneurial experience, entrepreneurial experience in target industry, college education, gender, and age, and on the other, the entrepreneurial unit level, namely, limited partnership, SME, competitive advantage, R&D activities, IP, gazelles, and the startup capital, as a moderator. We use controls by adding the variables related to the activity sector, such as service and manufacturing. Illustrating our model is given by the following (Fig. 1):



**Fig. 1** Conceptual model

### 3.2 Dataset and Variables

This chapter uses the Kauffman Firm Survey (KFS), which is a panel study of firms founded in 2004 and tracked over their early years of operation. This panel was created from a random sample of the Dun & Bradstreet (D&B) database. The dataset has 34,433 observations of 4919 companies corresponding to 6 years of survey, starting from 2004, year of foundation.

The variables included in the Cox proportional hazard model are described in Table 1 below. We intend to assess the major determinants for US startups' non-survival, based upon entrepreneurs' attributes, namely, their work experience, their entrepreneurial experience, the entrepreneurial experience in the target industry, entrepreneurs' college education, gender, and age. Moreover, we will also evaluate the effects of a set of determinants related with the startup, such as the fact that the company is a limited partnership, a SME, its competitive advantage, the R&D activities, the IPR it possesses, the gazelle condition, and its startup capital. Some of the variables were computed, being the cases for the gazelle status and the startup capital, using other variables such as employment, equity, and debt.

**Table 1** Variables description

Variables	Description	Mean	St. dev.
Work experience	If the entrepreneurs have prior work experience (year 0) equals to 1, otherwise is 0	0.9186827	0.2733496
Entrepreneurial experience	If the entrepreneurs have prior entrepreneurial experience (year 0) equals to 1, otherwise is 0	0.4238666	0.49422
Entrepreneurial experience in the target industry	If the entrepreneurs have prior entrepreneurial experience in the target industry (year 0) equals to 1, otherwise is 0	0.1784916	0.3829649
College education	Average college education of entrepreneurs (year 0), having college education equalling to 1 if the highest share is composed of founders with higher education or 0 if otherwise	0.2689571	0.4434627
Gender	Average gender of entrepreneurs (year 0), male equalling to 1 if the highest share is composed of men or female, 0, if otherwise	0.7391746	0.4391295
Age	Age of entrepreneur (year 0) in different intervals: 18–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75, or older	3.525.513	1.133.123
Limited partnership	If the startup is a limited partnership (year 0) equals to 1, otherwise is 0	0.3468185	0.4760058
SME	If the startup is a SME (year 0) equals to 1, otherwise is 0	0.0359829	0.1862665
Competitive advantage	If the startup owns unique assets (year 0), i.e., competitive advantage over competitors in the startup year equals to 1, otherwise is 0	0.6369181	0.4809371
R&D activities	If startup has at least one R&D employee (year 0) equals to 1, otherwise is 0	0.4212238	0.4938055
IP	If startups own IPRs, namely, patents, trademarks and/or copyrights (year 0) equals to 1, otherwise, is 0	0.2024802	0.401889
Gazelle	Computed variable, using firm growth measured through employees' growth of at least 20% per year, being equal to 1 if the startup is a gazelle assuming high growth, or 0 otherwise (year 0)	0.0451311	0.2076128
Startup capital	Amount of equity and debt invested by all owners in the startup year, in 5 intervals, namely, (1) <5000; (2) 5000–10,000; (3) 10,000–25,000; (4) 25,000–100,000; (5) >100,000 (USD)	2.892051	1.627069
Manufacturing	1 if the company is from the manufacturing sector, 0 otherwise (year 0)	0.235617	0.424427
Service	1 if the company is from the service sector, 0 otherwise (year 0)	0.3978451	0.4895029
Survival	1 if the startup survives at the end of the period and 0 if it exited	0.6480992	0.4776118



## 4 Results and Discussion

### 4.1 *Descriptive Statistics and Correlations*

Summarizing the main characteristics of our sample, firstly approximately 92% of the entrepreneurs have prior work experience. Moreover, 42% of the startup owners have been business owners in the past, and 17% also have entrepreneurial experience in the target industry. About 27% of the entrepreneurs have college education, and 74% are male with an average age of 44 years.

About 35% of the startups are limited partnerships, being 36% SMEs. Approximately 64% of the companies state they own unique assets, i.e., competitive advantages over competitors, and 42% have at least one R&D employee dedicated to R&D activities. About 20% of the startups own IPRs.

Only about 5% of the companies are considered high growers, for which we called gazelles, being the others the marginal growers.

Considering the startups' capital, using the amount of equity and debt invested by all owners in the startup year, the majority of firms is located in the second interval under analysis, namely, between 5000 and 10,000 USD. Approximately 40% corresponds to service firms, and 65% of the companies survived at the end of the period considered. Table 2 presented below reports the correlations for the variables under study.

The founder's work experience is significantly correlated with the male condition, with the firms' IP activity and negatively correlated with the small and medium dimension of the companies. The SME condition of firms is also negatively and significantly correlated with the ownership of IP rights.

### 4.2 *Cox Proportional Hazard Estimations*

The results of the Cox proportional hazard estimations are presented below in Table 3, showing the hazard ratios, using an Efron approximation to compute ties. When the hazard ratio is higher than one, there is a less likelihood of survival, while a hazard ratio under one corresponds to a greater likelihood of survival. We have tested seven models, corresponding the first one to the survival analysis of the entrepreneurs' attributes effects on survival, the second adding to the previous the moderating effect of the startup capital, the third one deals with the firms' characteristics and such effects on survival, the fourth adds the moderating effect of startup capitalization, the fifth predicts survival by using all the prior models, the sixth one adds to these the effects of crisis and activity sector to the prediction of survival, and the last one which contrasts results in crisis and out of the crisis.

Next tables summarize the survival results for all models. Model 1 presents significant hazard ratios for the effects of the founders' attributes on firm survival.

**Table 2** Variables correlations

	Work exp	Entr exp	Entr exp ind	Coll edu	Gender	Age	Ltd part	Manuf	Serv	SME	Compet advant	R&D	IP	Gazelle	Startup cap	Survival	Crisis
Work experience	1.000																
Entrepreneurial experience	0.4446	1.000															
Entrepreneurial experience in the target industry	0.3006	0.5885	1.000														
College education	0.3505	0.2209	0.1489	1.000													
Gender	0.7116	0.3980	0.2648	0.2726	1.000												
Age	0.3032	0.1973	0.1131	0.1464	0.2575	1.000											
Limited partnership	0.0078	-0.0588	-0.0721	-0.0936	-0.0411	-0.0562	1.000										
Manufacturing	0.0048	0.0095	0.0195	-0.0592	0.0519	0.0197	-0.0664	1.000									
Service	-0.0387	-0.0086	-0.0256	-0.0600	-0.0730	-0.0137	0.0805	-0.4513	1.000								
SME	-0.8385	-0.4235	-0.2376	-0.3366	-0.6636	-0.3148	-0.0240	0.0161	0.0152	1.000							
Competitive advantage	0.5305	0.3083	0.1955	0.2699	0.4181	0.2613	-0.0334	0.0081	-0.0387	-0.5459	1.000						
R&D activities	0.3873	0.2657	0.1776	0.1686	0.3308	0.2284	-0.1552	0.0768	-0.0512	-0.3939	0.3891	1.000					
IP	0.6788	0.3635	0.2177	0.3026	0.5447	-0.1112	-0.0150	0.0103	-0.0292	-0.7112	0.4531	0.3477	1.000				
Gazelle	0.1207	0.1021	0.0856	0.0606	0.1213	-0.0181	-0.0787	0.0700	-0.0468	-0.0747	0.1342	0.1800	0.1918	1.000			
Startup capital	0.3367	0.2727	0.1639	0.1936	0.3052	0.5468	-0.1085	0.0277	-0.0160	-0.3513	0.2783	0.2731	0.0690	-0.0052	1.000		
Survival	0.0959	0.0587	0.0316	0.0279	0.0856	0.1648	-0.0135	0.0115	-0.0012	-0.1062	0.0902	0.0698	-0.0031	-0.0006	0.1211	1.000	
Crisis	-0.1214	-0.0683	-0.0396	-0.0438	-0.0986	-0.2182	0.0000	-0.0000	-0.0000	0.1195	-0.1051	-0.0692	0.0165	0.0171	-0.1578	-0.0645	1.000

**Table 3** Survival results for model 1

Variables	Hazard ratio	Coefficient	Z	$P >  z $	[95% confidence interval]	
Work_exp	1.334.401	0.0561741***	6.85	0.000	1.228.721	1.449.169
Ent_exp	0.9395972	0.0407249	-1.44	0.151	0.8630742	1.022.905
Ent_exp_ind	1.055.914	0.0598156	0.96	0.337	0.9449518	1.179.907
College_ed	1.035.141	0.0402974	0.89	0.375	0.9590979	1.117.214
Gender	0.9451158	0.0386243	-1.38	0.167	0.8723661	1.023.932
Age_ent	1.017.745	0.0179737	1.00	0.319	0.9831203	105.359
Observations	34,433					
Failures	6390					
Likelihood ratio	99.62					

\*\*\*Significant at the 1% level. \*\*Significant at the 5% level. \*Significant at the 10% level

Firms with founders' prior work experience denote higher survival hazard ratios compared to others (Table 3).

Model 2 introduces the moderating effect of startup capitalization. Results denote that startups' owners, with prior work experience, have higher survival hazard ratios than other companies. Furthermore, college education of the owners moderated by owning startup capitalization lowers the likelihood of non-survival (Table 4).

Model 3 deals with the effects of the entrepreneurial unit characteristics on the firms' survival and points to the fact that limited partnerships have higher survival hazard ratios than other companies; firms with competitive advantages over competitors also have higher survival hazard ratios than firms with no competitive advantages. In addition, Cox results show that startups with IPR's and gazelles have lower survival hazard ratios, thus tend to live longer (Table 5).

Model 4 adds the moderating effects of startup capitalization to the firms' level attributes understudy. Results denote that small- and medium-sized startups have lower survival hazard ratios than other companies. Adding to this, firms with R&D activities denote higher survival hazard ratios than firms with no declared R&D. Small- and medium-sized startups moderated by the effect of startup capitalization denote a higher survival hazard ratio, being the same effect found for firms with R&D moderated by startup capitalization. On the opposite, gazelle companies moderated by the effect of startup capital denote lower survival hazard ratios (Table 6).

Model 5 aggregates the effects of the previous four models. In accordance with previous models, work experience of the founders lowers survival hazard ratios. Small- and medium-sized startups have higher survival hazard ratios when compared with non-SME. Firms that possess R&D activities have higher survival hazard ratios than others.

SMEs with startup capital and pursuing a competitive advantage strategy have higher survival hazard ratios than other firms. R&D-oriented firms with startup capitalization have lower survival hazard ratios than the opposite firms, so the former survive more (Table 7).

**Table 4** Survival results for model 2

Variables	Hazard ratio	Coefficient	Z	$P >  z $	[95% confidence interval]
Work_exp	1.258.273	0.1194048***	2.42	0.015	1.044.719
Ent_exp	1.047.074	0.1048955	0.46	0.646	0.8604079
Ent_exp_ind	0.8749444	0.1123626	-1.04	0.298	0.6802476
College_ed	0.9010035	0.0819539	-1.15	0.252	0.7538805
Gender	1.015.989	0.096695	0.17	0.868	0.8430963
Age_ent	103.474	0.0415242	0.85	0.395	0.9564718
Work_expXStart_cap	104.588	0.0631978	0.74	0.458	0.9290687
Ent_expXStart_cap	0.9320926	0.056027	-1.17	0.242	0.8285035
Ent_exp_indXStart_cap	1.125.118	0.0819346	1.62	0.105	0.9754633
College_edXStart_cap	109.277	0.0586412**	1.65	0.098	0.9836731
GenderXStart_cap	0.9474196	0.0569459	-0.90	0.369	0.8421312
Age_entXStart_cap	0.9915766	0.0197389	-0.42	0.671	0.9536634
Observations	34,433				
Failures	6390				
Likelihood ratio	106.96				

\*\*\*Significant at the 1% level. \*\*Significant at the 5% level. \*Significant at the 10% level

**Table 5** Survival results for model 3

Variables	Hazard ratio	Coefficient	Z	$P >  z $	[95% confidence interval]	
Ltd_partnership	1.063.179	0.028133**	2.32	0.021	1.009.444	1.119.773
SME	102.818	0.0659679	0.43	0.665	0.9066848	1.165.957
Comp_adv	1.263.404	0.0455969***	6.48	0.000	1.177.123	1.356.009
R&D	1.028.466	0.0396504	0.73	0.467	0.9536157	1.109.191
IP	114.234	0.0767635**	1.98	0.048	1.001.374	1.303.151
Gazelle	0.7232642	0.0505801***	-4.63	0.000	0.630623	0.8295147
Startup_cap	1.039.193	0.025958	1.54	0.124	0.9895419	1.091.336
Observations	34,433					
Failures	6390					
Likelihood ratio	148.87					

\*\*\*Significant at the 1% level. \*\*Significant at the 5% level. \*Significant at the 10% level

Assessing the results for the sixth model (Table 8), the working experience of founders and firms with R&D activities prove to have higher survival hazard ratios. On the contrary, SMEs denote lower survival hazard ratios. More to this, SMEs and firms with a competitive advantage strategy moderated by the effect of startup capitalization have higher survival hazard ratios. On the other side, firms with R&D activities moderated by the effect of startup capitalization have a lower likelihood of non-survival. Plus we can conclude that startups during the financial crisis period of 2007–2008 have a higher likelihood of non-survival rather than firms in other periods.

Next model contrasts results during crisis and out of crisis period (Table 9).

Our results for non-crisis period denote that founders' work experience affect firms' survival, being likely to be endangered. On the contrary, founders' college education and the small and medium size of the companies under analysis lower firms' survival hazard ratios. Moreover, the moderating effect of startup capitalization over the SME size of the companies as well as the strategy targeted at competitive advantage moderated by startup capital signal a lower likelihood of firm survival.

During a crisis period, the owners' age and the R&D activities in startups point to a higher likelihood of firm exit. Startups with a competitive advantage orientation tend to survive longer. Nevertheless, when analyzing the moderating effect of startup capital over the firms' competitive advantage strategy, the results obtained suggest that these kinds of firms have a higher survival hazard ratio. On the contrary, firms having R&D activities moderated by startup capitalization are more likely to live longer.

Summing up, we conclude that when the main entrepreneur and entrepreneurial level determinants of firm survival where analyzed per se the most important are the founders' college education, IP activity, firms' small and medium size, and the gazelle condition impact on the firms' chances of survival. Taken these all together including the moderating effect of startup capitalization, results point to the fact that owners' work experience and the small- and medium-sized companies as well as the companies' R&D activities moderated by capitalization access higher the chances of

**Table 6** Survival results for model 4

Variables	Hazard ratio	Coefficient	Z	$P >  z $	[95% confidence interval]
Ltd_part	0.9772763	0.0666027	-0.34	0.736	0.8550801
SME	0.6186847	0.0938257***	-3.17	0.002	0.4596017
Comp_adv	0.9957764	0.0827298	-0.05	0.959	0.8461424
R&D	1.200.363	0.1046903**	2.09	0.036	1.011.754
IP	0.9793899	0.1745848	-0.12	0.907	0.690592
Gazelle	0.9149683	0.1479814	-0.55	0.583	0.6664045
Startup_cap	0.9212122	0.1228763	-0.62	0.538	0.7092866
Ltd_partXStart_cap	1.073.834	0.0566964	1.35	0.177	0.9682672
SMEXStart_cap	1.450.163	0.1410263***	3.82	0.000	1.198.501
Comp_advXStart_cap	1.175.573	0.0612871***	3.10	0.002	1.061.386
R&DXStart_cap	0.8969082	0.0481516**	-2.03	0.043	0.8073284
IPXStart_cap	1.047.022	0.1388605	0.35	0.729	0.8073575
GazelleXStart_cap	0.8374308	0.0864819***	-1.72	0.086	0.6839823
Observations	34,433				
Failures	6390				
Likelihood ratio	175.78				

\*\*\*Significant at the 1% level. \*\*Significant at the 5% level. \*Significant at the 10% level

Table 7 Survival results for model 5

Variables	Hazard ratio	Coefficient	Z	$P >  z $	[95% confidence interval]
Work_exp	142.054	0.2060981**	2.42	0.016	106.895
Ent_exp	1.057.841	0.1068545	0.56	0.578	0.8678385
Ent_exp_ind	0.9048195	0.117389	-0.77	0.441	0.7016639
College_ed	0.9007778	0.0830482	-1.13	0.257	0.7518656
Gender	1.010.079	0.096678	0.10	0.917	0.8373056
Age_ent	1.031.458	0.0426858	0.75	0.454	0.9510988
Work_expXStart_cap	0.9153939	0.0834839	-0.97	0.332	0.7655586
Ent_expXStart_cap	0.9142322	0.0556256	-1.47	0.141	0.8114578
Ent_exp_indXStart_cap	1.107.177	0.0817026	1.38	0.168	0.9580845
College_edXStart_cap	1.085.069	0.0592314	1.50	0.135	0.9749719
GenderXStart_cap	0.9545271	0.0575232	-0.77	0.440	0.8481874
Age_entXStart_cap	0.9949115	0.0203618	-0.25	0.803	0.955793
Ltd_part	0.9584215	0.0662372	-0.61	0.539	0.8370077
SME	0.7171639	0.1124575**	-2.12	0.034	0.5274031
Comp_adv	0.9927592	0.0830618	-0.09	0.931	0.8426086
R&D	1.181.301	0.1044912**	1.88	0.060	0.9932713
IP	0.8100521	0.1532041	-1.11	0.265	0.5591474
Gazelle	0.9004274	0.146239	-0.65	0.518	0.6549444
Startup_cap	0.9529709	0.1455752	-0.32	0.753	0.7064
Ltd_partXStart_cap	10.922	0.0586358	1.64	0.100	0.9831152
SMEXStart_cap	1.354.952	0.1350341***	3.05	0.002	1.114.534
Comp_advXStart_cap	1.175.444	0.0618368***	3.07	0.002	1.060.284
R&DXStart_cap	0.9080931	0.0496459**	-1.76	0.078	0.8158207
IPXStart_cap	1.125.093	0.1540048	0.86	0.389	0.8603489
GazelleXStart_cap	0.848008	0.0879645	-1.59	0.112	0.6919969

Observations	34,433
Failures	6390
Likelihood ratio	200.25

\*\*\*Significant at the 1% level. \*\*Significant at the 5% level. \*Significant at the 10% level



Table 8 Survival results for model 6

Variables	Hazard ratio	Coefficient	Z	$P >  z $	[95% confidence interval]
Work_exp	1.410.233	0.2039607**	2.38	0.017	1.062.142
Ent_exp	1.047.668	0.105702	0.46	0.644	0.8596933
Ent_exp_ind	0.9136154	0.118072	-0.70	0.485	0.7091817
College_ed	0.9179825	0.0844183	-0.93	0.352	0.7665797
Gender	1.012.184	0.0962384	0.13	0.899	0.8400931
Age_ent	1.040.107	0.0431708	0.95	0.343	0.9588436
Work_expXStart_cap	0.9142914	0.0832631	-0.98	0.325	0.7648338
Ent_expXStart_cap	0.9258164	0.0562141	-1.27	0.204	0.8219422
Ent_exp_indXStart_cap	1.096.944	0.0805224	1.26	0.207	0.9499502
College_edXStart_cap	1.071.418	0.0582011	1.27	0.204	0.9632081
GenderXStart_cap	0.9548257	0.0570335	-0.77	0.439	0.8493375
Age_entXStart_cap	0.9902188	0.0203583	-0.48	0.633	0.9511105
Ltd_part	0.9650534	0.0666053	-0.52	0.606	0.8429539
SME	0.7348273	0.1142549**	-1.98	0.048	0.5417962
Comp_adv	0.958442	0.0800876	-0.51	0.611	0.813653
R&D	1.173.181	0.1034447**	1.81	0.070	0.9869856
IP	0.8177339	0.1546034	-1.06	0.287	0.5645223
Gazelle	0.929756	0.149856	-0.45	0.651	0.6779134
Startup_cap	0.9451856	0.1438698	-0.37	0.711	0.7013793
Ltd_partXStart_cap	108.347	0.0580478	1.50	0.135	0.9754679
SMEXStart_cap	1.361.394	0.1348961***	3.11	0.002	1.121.092
Comp_advXStart_cap	1.183.117	0.0621624***	3.20	0.001	1.067.344
R&DXStart_cap	0.9025934	0.0491263**	-1.88	0.060	0.8112655
IPXStart_cap	1.131.266	0.155218	0.90	0.369	0.8645174
GazelleXStart_cap	0.8471458	0.087086	-1.61	0.107	0.6925565
Manufact	0.9513591	0.0321146	-1.48	0.140	0.8904527

Service	0.9903779	0.02842	-0.34	0.736	0.9362132	1.047.676
Crisis	3.686.337	0.1456497***	33.02	0.000	3.411.642	398.315
Observations	34,433					
Failures	6390					
Likelihood ratio	1421.26					

\*\*\*Significant at the 1% level. \*\*Significant at the 5% level. \*Significant at the 10% level

Table 9 Survival results for model 7<sup>a</sup>

Variables	Hazard ratio	Coefficient	z	P >  z	[95% confidence interval]
<b>Crisis = 0</b>					
Observations—24,595					
Failures—4174					
Likelihood ratio—109.84					
Work_exp	1.609.575	0.2966682**	2.58	0.010	112.156
Ent_exp	10.306	0.1308606	0.24	0.812	0.803542
Ent_exp_ind	0.9999929	0.1626369	-0.00	1.000	0.7270415
College_ed	0.8212587	0.0966305**	-1.67	0.094	0.6521184
Gender	0.9900191	0.1200919	-0.08	0.934	0.7805318
Age_ent	1.002.653	0.0564826	0.05	0.962	0.8978416
Work_expXStart_cap	0.8918497	0.1026468	-0.99	0.320	0.7117431
Ent_expXStart_cap	0.9441978	0.0723489	-0.75	0.454	0.8125309
Ent_exp_indXStart_cap	1.043.445	0.0974492	0.46	0.649	0.8689093
College_edXStart_cap	1.113.784	0.0777604	1.54	0.123	0.9713441
GenderXStart_cap	0.9423083	0.0724279	-0.77	0.439	0.8105276
Age_entXStart_cap	0.9874589	0.0277686	-0.45	0.654	0.9345061
Comp_adv	0.967531	0.0845502	-0.38	0.706	0.8152306
R&D	0.7157789	0.1399967**	-1.71	0.087	0.4878602
IP	1.034.007	0.1091755	0.32	0.751	0.8407161
Gazelle	1.081.508	0.1217931	0.70	0.487	0.8673063
Startup_cap	0.675866	0.1650222	-1.60	0.109	0.4188203
Comp_adv	0.8644587	0.1725809	-0.73	0.466	0.5845344
R&D	0.8822546	0.1772722	-0.62	0.533	0.5950606
Ltd_partXStart_cap	1.061.693	0.0729709	0.87	0.384	0.9278871
SMEXStart_cap	1.363.637	0.1687911**	2.51	0.012	1.069.884
Comp_advXStart_cap	1.141.758	0.0761527**	1.99	0.047	1.001.846

R&DStart_cap	0.9505724	0.0662921	-0.73	0.467	0.829131	1.089.801
IPXStart_cap	1.247.789	0.2263241	1.22	0.222	0.8744801	178.046
GazelleXStart_cap	0.9203254	0.1159633	-0.66	0.510	0.7189321	1.178.135
Manufact	0.970131	0.0403532	-0.73	0.466	0.8941784	1.052.535
Service	0.9884853	0.0351718	-0.33	0.745	0.9218986	1.059.881
<b>Crisis = 1</b>						
Observations—9838						
Failures—2216						
Likelihood ratio—59.98						
Work_exp	1.067.587	0.2476134	0.28	0.778	0.6776072	1.682.011
Ent_exp	1.074.611	0.1791231	0.43	0.666	0.7751171	1.489.824
Ent_exp_ind	0.79491	0.1699287	-1.07	0.283	0.5228243	1.208.593
College_ed	1.119.116	0.1649633	0.76	0.445	0.838308	1.493.986
Gender	1.070.209	0.1646948	0.44	0.659	0.7915475	1.446.973
Age_ent	1.115.343	0.0690082**	1.76	0.078	0.987969	125.914
Work_expXStart_cap	0.971582	0.1446003	-0.19	0.846	0.7257639	130.066
Ent_expXStart_cap	0.8955075	0.0896769	-1.10	0.270	0.7359175	1.089.706
Ent_exp_indXStart_cap	11.893	0.142003	1.45	0.147	0.9411468	1.502.883
College_edXStart_cap	1.003.521	0.0867754	0.04	0.968	0.8470758	118.886
GenderXStart_cap	0.9617458	0.0920217	-0.41	0.684	0.7972888	1.160.125
Age_entXStart_cap	0.9839147	0.0300691	-0.53	0.596	0.9267106	104.465
Comp_adv	0.9742799	0.1103704	-0.23	0.818	0.7802903	1.216.498
R&D	0.8739908	0.2227218	-0.53	0.597	0.5303866	1.440.195
IP	0.7945574	0.1088739**	-1.68	0.093	0.6074209	1.039.348
Gazelle	1.285.901	0.1835008**	1.76	0.078	0.972163	1.700.888
Startup_cap	1.115.599	0.3307331	0.37	0.712	0.6239634	1.994.607
Comp_adv	1.037.505	0.2874077	0.13	0.894	0.6028259	1.785.618
R&D	1.011.939	0.2339915	0.05	0.959	0.6431763	1.592.129

(continued)

Table 9 (continued)

Variables	Hazard ratio	Coefficient	z	$P >  z $	[95% confidence interval]
Ltd_partXStart_cap	1.108.783	0.0953642	1.20	0.230	0.9367771
SMEXStart_cap	1.246.916	0.2059097	1.34	0.181	0.9021399
Comp_advXStart_cap	1.257.638	0.1078126***	2.67	0.007	1.063.128
R&DXStart_cap	0.8334613	0.0735577**	-2.07	0.038	0.7014009
IPXStart_cap	0.9980636	0.207087	-0.01	0.993	0.6645742
GazelleXStart_cap	0.7604083	0.1381364	-1.51	0.132	0.5326192
Manufact	0.918284	0.053065	-1.48	0.140	0.8199523
Service	0.994379	0.048316	-0.12	0.908	0.9040506
Observations		34,433			
Failures		6390			
Likelihood ratio		109.84			

\*\*\*Significant at the 1% level. \*\*Significant at the 5% level. \*Significant at the 10% level  
<sup>a</sup>Only significant values are presented

firm survival. Crisis increases firms' exit, nonetheless startups pursuing a competitive advantage strategy and the moderating effect of startup capital on their internal R&D activities increase the chances of survival.

## 5 Discussion

Our results reveal that the founders' college education, IP activity, firms' small and medium size, and the gazelle condition affect the likelihood of survival. Taken these all together including the moderating effect of startup capitalization, results show that owners' work experience and the small- and medium-sized companies, as well as the companies' R&D activities moderated by capitalization access, increase the chances of firm longevity. Crisis also increase firms' exit; however startups pursuing a competitive advantage strategy and the moderating effect of startup capital on their internal R&D activities increase the chances of survival.

In this section we will contrast our findings with our propositions. Proposition 1 declared that the longer the previous entrepreneurs' work experience, the higher the chances of survival. We find partial support for this proposition, as our results for model 5 suggest that founders with prior work experience are more prone to lower survival hazard ratios. Our results are in line with findings of previous authors who defended that the founders' prior experiences play in favor of the new venture's success (Wagner 2003; Schutjens and Stam 2006; Stam et al. 2008; Amaral et al. 2011; Braguinsky et al. 2012), due to a prior acquisition of technical and regulatory knowledge or personal networks (Klepper 2002; Agarwal et al. 2004; Colombo et al. 2004; Ensley et al. 2002; Chatterji 2009; Dencker et al. 2009).

The second proposition stated that the previous entrepreneurs' experience as business owners moderated by the effect of this having been in the target industry of the new venture increases the likelihood of firm survival. Here, our results do not confirm such statement, as we found no evidence of such relationship.

The third proposition argues that the entrepreneurs' college education influences the likelihood of firm survival. The results obtained from the first model estimation suggest that firms with college educated owners have lower survival hazard ratios, thus exit less. This is in line with Baptista et al. (2012, 2014) who pointed to an important correlation between highly educated business owners and startups' performance. Our findings are also in accordance with De Clercq and Arenius (2006), Coleman (2007), Shrader and Siegel (2007), Kessler and Frank (2009), Serneels (2008), and Ucbasaran et al. (2008), who argue that education and organizational experience affect firms' financial performance, growth, and innovation.

The fourth proposition states that new ventures' founders' college education has a moderator effect on obtaining higher startup capitalization, thus being more prone to survive. Our results do not allow ratifying or rejecting such proposition.

Proposition 5 stated that the new venture's positioning in a strategy targeted at competitive advantage impacts positively on firm survival, especially for gazelles. We observed that for models 3 and 4, startups with competitive advantages over

competitors have higher survival hazard ratios than firms with no competitive advantages, thus being more likely non-survival. Our findings contrast with previous studies of Senderovitz et al. (2012) who argue there is a positive relationship between firm survival and growth, and the strategy they follow targeted a broad market strategy. In a related vein, Parker et al. (2010) stress the importance of undertaking growth strategies focused on innovation in medium-sized firms, explaining survival. Conversely, Colombelli et al. (2014) found that gazelles survive and grow more when they have a competitive advantage based on familiar technology and technological knowledge generation. An additional concern here is related to the lack of data for testing the role played by business models that help to intermediate the home-based development of a technology and its successful commercial exploitation (Teece 2010b).

Our sixth proposition defends that the new ventures' IPRs portfolio impacts positively on firm survival. Results for model 3 suggest that startups with an IP portfolio have lower survival hazard ratios than startups with no IP. We partially support previous studies (Cohen et al. 2002; Ziedonis 2004; Hallen 2008; Srinivasan et al. 2008; Wagner and Cockburn 2010; Cantner et al. 2011; Medrano 2012; Coleman et al. 2013) stating that owning patents and other intellectual property rights (IPR) increase the chances of successful survival. Adding to this, Hsu (2007) defended that patents enable the founder to accomplish fundraising along the different stages of the firm's lifecycle.

Proposition 7 states that the new ventures' capacities for obtaining higher startup capitalization enable them to survive. The results we obtained do not confirm such direct relation, however related with this last proposition, Proposition 8 argues that the new ventures' access to higher startup capitalization moderates the effects of firms and owners attributes improving the chances of survival. Our results support the proposition, as the founders' college education moderated by the effect of startup capitalization lower the survival hazard ratios when compared to others. The same trend is detected with the moderating effect of startup capital on firms having R&D activities, and such effects on gazelles increase the chances of survival. Our findings see support in the literature which correlates the existence and amount of initial financial capital and firms' survival (Cooper et al. 1989; Holtz-Eakin et al. 1994; Caves 1998; Headd 2001; Lee and Zhang 2011). Nevertheless, Lee and Zhang (2011) also point that the existence of startup capital in the form of equity investments decreases the likelihood of startup longevity.

The last proposition argues that the financial crisis improves the likelihood of startups' non-survival, being gazelles more prone to avoid exit. Our results do not confirm such proposition, as during crisis, gazelle startups are not more likely to survive. Our findings also point to a relation between startups pursuing a competitive advantage orientation, firms' R&D activities moderated by the effect of startup capitalization, and the higher likelihood of survival.

Of particular interest, we detected that during crisis the moderating effect of startup capital over the startups' R&D activities affects the likelihood of a higher survival hazard ratio, probably due to the scarcity of financial support available in such periods. These results are aligned with the studies of Schneider and Veugelers

(2010), Filippetti and Archibugi (2011), Hutton and Lee (2012), Mason (2013), and Mina et al. (2013), who argue that during crisis ensuring access to external finance sources is more difficult, especially for smaller firms, fact that has consequences on the firm survival. Paunov (2012) also defended that during crisis, obtaining financial support for pursuing the innovative projects is harder, with the exception of firms with access to public sources of external finance.

### ***5.1 Implications for Policymakers and Entrepreneurs***

Fast growth firms are a key player in modern knowledge economies, marked by high turbulence and technological change, and are also important "new job promoters". Understanding what drives the sustainable growth of such firms and predicting the determinants that can most affect their performance and survival, in order to prevent exit over many years, is therefore critical for ensuring a sustainable economic growth. As so, both policymakers and entrepreneurs must be aware of such influencers on survival and be able to react and catalyze them.

To prevent the decision to exit, stakeholders such as the policymakers and entrepreneurs should focus on the hazard determinants and design, in a truly cooperative basis, private and public incentives, and funding programs for strengthening prior entrepreneurial experience, work experience, and higher startup capitalization. Moreover, being more supportive of shared IP portfolios (e.g., using international patent box schemes) and R&D reinvestment programs (by launching tax incentives for promoting a new type of R&D bootstrapping, through the strategic allocation of a percentage of the profits to additional investments in both internal and external R&D) can influence the performance of startups, and specifically gazelles, in order to reinforce their dynamic capabilities and to survive longer. During crisis, these stakeholders must be aware that fast growers are more resilient. On the other hand, the development of formal programs for improving managerial, IP, and financial literacy competences could enhance the strategic factors that revealed low survival hazard rates, such as the firm's innovation portfolio, the experience of the owners regarding the industry/sector characteristics, the managerial, entrepreneurial, and financial capacities.

Moreover, innovation at the industrial policy level is required, in order to relaunch intangible investment programs dedicated to the screening of high-growth entrepreneurship, using early warning indicators that could help in preventing financial stress and in restructuring the business, by providing organizational endurance oriented to firm survival and performance. The support for global entrepreneurs to lead ventures funded on co-branded joint-ventures, mergers, and acquisitions or consortia of high-growth firms is also welcome, since this could be a new pathway for creating scale and establishing new global trademarks. In this scope the exploration of cooperation strategies applied to gazelle startups is considered as a high potential framework for leveraging endogenous economic growth based on innovative and entrepreneurial units, which need to foster the scale and the intensity of



intangible assets, in order to be able to survive, facing highly turbulent and competitive platforms.

## **5.2 *Limitations and Future Research***

The present study's results should be analyzed bearing its limitations in mind. From one side, the aim is to tackle firms' business exit (or to assure the firms' survival), especially that of gazelle startups, so far, an under explored topic, using a dataset with restrictions at the data availability level. The results drawn are based on a dataset with a low percentage of gazelles in the whole sample. This can be a limitation, so future research should focus on wider samples with a longitudinal basis, which can be used for forecasting and contrasting purposes.

Future research would benefit from analyzing other determinant factors concerning technological structure or entrepreneurial innovation capacity of high-growth firms engaged both in manufacturing and service activities. This probably will play an important role when interpreting the importance of the diversity of technological capabilities for the survival, success, and exit patterns of high-technology versus low-technology fast-growing new firms.

Another important issue when focusing on the dynamic capabilities, which are able to impact other capabilities, namely, the entrepreneurial innovation capacity, it would be useful to examine the implications of having outsourced capabilities (e.g., cooperation schemes, alliance capabilities, IP transactions, scope of IP, diversity of IP portfolios, etc.) for building these firms' knowledge base (and hence absorptive capacity).

Our results are also derived from the KFS survey composed of startups in different activity sectors. It would be of interest to compare patterns among different sectors, regarding collaborative and cooperative industry intensiveness, e.g., alliance capabilities, and entrepreneurial innovation capacity.

Future research could focus on analyzing other datasets to promote further understanding of the determinants of survival. Other characteristics and determinant factors should be analyzed, gathering data from alternative primary sources, regarding corporate R&D strategy and the entrepreneur's innovation behavior. On one hand, this includes cooperation with the external environment, patenting patterns, and cooperation strategies, such as coinventorship and co-branding with diversified stakeholders and international patenting patterns. On the other hand, the genetic, psychological, and behavioral characteristics of the entrepreneur which may influence the leadership process of technological and corporate change within the context of a resilient firm type, such as gazelle startups, deserve further research. Of particular interest is to unveil the role of founders' teammates, their shared experiences, and skills on the future startup performance and survival.

## 6 Conclusions

This chapter tackles firms' business survival, especially that of gazelle startups. Using a Cox regression model, we assess the determinant factors of firm survival among a sample of 4919 firms created in 2004–2010, according to data collected from the Kaufman Foundation Survey.

The results obtained allow us to conclude that the founders' college education, IP activity, firms' small and medium size, and the gazelle condition affect the likelihood of survival. When assessing such conditions including the moderating effect of startup capitalization, findings point out that owners' work experience and the small- and medium-sized companies, as well as the companies' R&D activities moderated by capitalization access, increase the chances of firm longevity. Crisis also impacts on the firms' non-survival, nevertheless startups having a competitive advantage strategy and the moderating effect of startup capital on their internal R&D activities increase their chances of living longer.

Our empirical findings reveal that, consistent with prior research, gazelles tend to survive longer than non-gazelles, possibly due to their dynamic capabilities and resilience capacity for anticipating and addressing the changes in technology and market.

The findings help to clarify the role of a set of entrepreneur-level determinants, from one side, and, from the other, a mix of the entrepreneurial unit-level factors of firm survival when dealing with startups and high-growth firms. Lastly, the results can allow for diverse interpretations and guide policymakers and why not, global entrepreneurs when focusing on the corporate R&D strategy and on the entrepreneurial innovation capacity and strategy of the firm in determining the potential benefits and survival hazard risks associated with behaviors oriented to global ventures and competition.

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## References

- Acs, Z., & Mueller, P. (2008). Employment effects of business dynamics: Mice, gazelles and elephants. *Small Business Economics*, 30, 85–100.
- Acs, Z., Parsons, W., & Tracy, S. (2008). *High impact firms: Gazelles revisited*. Office of Advocacy, US Small Business Administration.
- Agarwal, R., Echambadi, R., Franco, A., & Sarkar, M. (2004). Knowledge transfer through inheritance: Spinout generation, development, and survival. *Academy of Management Journal*, 47, 501–522.
- Ahmad, N. (2006). *A proposed framework for business demographic statistics*. OECD Statistics Working Paper Series, STD/DOC 3. Paris.

- Amaral, A., Baptista, R., & Lima, F. (2011). Serial entrepreneurship: Impact of human capital on time to re-entry. *Small Business Economics*, 37(1), 1–21.
- Åstebro, T., Chen, J., & Thompson, P. (2011). Stars and misfits: Self-employment and labor market frictions. *Management Science*, 57(11), 1999–2017.
- Audretsch, D., & Lehmann, E. (2005). The effects of experience, ownership, and knowledge on IPO survival: Empirical evidence from Germany. *Review of Accounting and Finance*, 4, 13–33.
- Audretsch, D., & Mahmood, T. (1994). The rate of hazard confronting new firms and plants in US manufacturing. *Review of Industrial Organization*, 9, 41–56.
- Bangma, K., & Snel, D. (2009). *Bedrijvendynamiek en werkgelegenheid, periode 1987–2008*. Zoetermeer: EI.
- Baptista, R., & Karaöz, M. (2011). Turbulence in growing and declining industries. *Small Business Economics*, 36, 249–270.
- Baptista, R., Lima, F., & Mendonça, J. (2012, February 23). *Human capital and the performance of firms over time*. <https://doi.org/10.2139/ssrn.2009673>. Retrieved from <http://ssrn.com/abstract=2009673>
- Baptista, R., Karaöz, M., & Mendonça, J. (2014). The impact of human capital on the early success of necessity vs. opportunity-based entrepreneurs. *Small Business Economics*, 42(4), 831–847.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17, 99–120.
- Baum, J., Calabrese, T., & Silverman, B. (2000). Don't go it alone: Alliance network composition and startups' performance in Canadian biotechnology. *Strategic Management Journal*, 21, 267–294.
- Beck, T., & Demirguc-Kunt, A. (2006). Small and medium-size enterprises: Access to finance as a growth constraint. *Journal of Banking and Finance*, 30, 2931–2943.
- Becker, G. (1964). *Human capital: A theoretical and empirical analysis, with special reference to education*. Chicago: Chicago University Press.
- Beckman, C. (2006). The influence of founding team company affiliations on firm behavior. *Academy of Management Journal*, 49(4), 741–758.
- Birch, D., Haggerty, A., & Parsons, W. (1995). *Who's creating jobs?* Boston: Cognetics.
- Bjuggren, C., Daunfeldt, S.-O., & Johansson, D. (2013). High-growth firms and family ownership. *Journal of Small Business and Entrepreneurship*, 26(4), 365–385.
- Bottazzi, G., & Secchi, A. (2006). Explaining the distribution of firms growth rates. *RAND Journal of Economics*, 37, 234–263.
- Braguinsky, S., Klepper, S., & Ohyama, A. (2012). High-tech entrepreneurship. *Journal of Law and Economics*, 55(4), 869–900.
- Bravo-Biosca, A. (2010). *Growth dynamics: Exploring business growth and contraction in Europe and the US*. Research Report. London: NESTA.
- Brüderl, J., Preisendörfer, P., & Ziegler, R. (1992). Survival chances of newly founded business organizations. *American Sociological Review*, 57(2), 227–242.
- Buddelmeyer, H., Jensen, P., & Webster, E. (2010). Innovation and the determinants of company survival. *Oxford Economic Papers*, 62(2), 261–285.
- Cantner, U., Krueger, J., & von Rhein, K. (2011). Knowledge compensation in the German automobile industry. *Applied Economics*, 43, 2941–2951.
- Carroll, G., & Hannan, M. (2000). *Demography of corporations and industries*. Princeton, NJ: Princeton University Press.
- Caves, R. (1998). Industrial organization and new findings on the turnover and mobility of firms. *Journal of Economic Literature*, 36(4), 1947–1982.
- Cefis, E., & Marsili, O. (2007). *Going, going, gone. Innovation and exit in manufacturing firms*. ERIM Report Series. Reference No. ERS-2007-015-ORG.
- Cefis, E., & Marsili, O. (2011). Born to flip. Exit decisions of entrepreneurial firms in high-tech and low-tech industries. *Journal of Evolutionary Economics*, 21, 473–498.
- Chatterji, A. (2009). Spawned with a silver spoon? Entrepreneurial performance and innovation in the medical device industry. *Strategic Management Journal*, 30(2), 185–206.

- Chen, P.-L., Williams, C., & Agarwal, R. (2012). Growing pains: Pre-entry experience and the challenge of transition to incumbency. *Strategic Management Journal*, 33, 252–276.
- Coad, A. (2007). A closer look at serial growth rate correlation. *Review of Industrial Organization*, 31(1), 69–82.
- Coad, A., & Hözl, W. (2011). Firms' growth: Empirical analysis. In M. Dietrich & J. Krafft (Eds.), *Handbook on the economics and theory of the firm*. Cheltenham: Edward Elgar.
- Coad, A., & Rao, R. (2008). Innovation and firm growth in high-tech sectors: A quantile regression approach. *Research Policy*, 37(4), 633–648.
- Coad, A., & Timmermans, B. (2014). Two's company: Composition, structure and performance of entrepreneurial Pairs. *European Management Review*, 11(2), 117–138.
- Colombelli, A., Krafft, J., & Quattraro, F. (2014). High-growth firms and technological knowledge: Do gazelles follow exploration or exploitation strategies?. *Industrial and Corporate Change*, 23(1), 261–291.
- Cooper, A. C., Woo, C. Y., & Dunkelberg, W. C. (1989). Entrepreneurship and the initial size of firms. *Journal of Business Venturing*, 4(5), 317–332.
- Coad, A., Frankish, J. S., Nightingale, P., & Roberts, R. G. (2014). Business experience and start-up size: Buying more lottery tickets next time around? *Small Business Economics*, 43(3), 529–547.
- Cohen, W., Goto, A., Nagata, A., Nelson, R., & Walsh, J. (2002). R&D spillovers, patents and the incentives to innovate in Japan and the United States. *Research Policy*, 31(8–9), 1349–1367.
- Coleman, S. (2007). The role of human and financial capital in the profitability and growth of women-owned small firms. *Journal of Small Business Management*, 45(3), 303–319.
- Coleman, S., Cotei, C., & Farhat, J. (2013). A resource-based view of new firm survival: New perspectives on the role of industry and exit route. *Journal of Developmental Entrepreneurship*, 18(01), 1350002. <https://doi.org/10.1142/S1084946713500027>. 25 p.
- Colombo, M., & Grilli, L. (2005). Founders' human capital and the growth of new technology-based firms: A competence-based view. *Research Policy*, 34(6), 795–816.
- Colombo, M., Delmastro, M., & Grilli, L. (2004). Entrepreneurs' human capital and the startup size of new technology-based firms. *International Journal of Industrial Organization*, 22, 1183–1211.
- Cooper, A., Gimeno-Gascon, F., & Woo, C. (1994). Initial human and financial capital as predictors of new firm venture performance. *Journal of Business Venturing*, 9, 371–395.
- Cowling, M., Liu, W., & Ledger, A. (2012). Small business financing in the UK before and during the current financial crisis. *International Small Business Journal*, 30(7), 778–800.
- Davidsson, P., & Delmar, F. (2003). Hunting for new employment: The role of high growth firms. In D. A. Kirby & A. Watson (Eds.), *Small firms and economic development in developed and transition economies: A reader* (pp. 7–19). Hampshire: Ashgate Publishing.
- Davidsson, P., Delmar, F., & Wiklund, J. (2006). Entrepreneurship as growth; growth as entrepreneurship. In *Entrepreneurship and the growth of firms* (pp. 21–38). Cheltenham: Edward Elgar.
- De Clercq, D., & Arenius, P. (2006). The role of knowledge in business start-up activity. *International Small Business Journal*, 24(4), 339–358.
- De Winne, S., & Sels, L. (2010). Interrelationships between human capital, HRM and innovation in Belgian start-ups aiming at an innovation strategy. *International Journal of Human Resource Management*, 21, 1863–1883.
- Delmar, F. (1997). Measuring growth: Methodological considerations and empirical results. In R. Donkels & A. Miettinen (Eds.), *Entrepreneurship and SME research: On its way to the next millennium* (pp. 199–215). Aldershot: Ashgate Publishing.
- Delmar, F., & Davidsson, P. (1998). A taxonomy of high-growth firms. In P. D. Reynolds & W. D. Bygrave (Eds.), *Frontiers of entrepreneurship research* (pp. 399–413). Wellesley, MA: Babson College.
- Delmar, F., Davidsson, P., & Gartner, W. (2003). Arriving at the high growth firm. *Journal of Business Venturing*, 18, 189–216.

- Dencker, J., Gruber, M., & Shah, S. (2009). Pre-entry knowledge, learning, and the survival of new firms. *Organization Science*, 20(3), 516–537.
- DeTienne, D., & Cardon, M. (2008). *The impact of new venture design on entrepreneurial exit*. Babson College, Babson College Entrepreneurship Research Conference (BCERC).
- Dimov, D. P., & Shepherd, D. A. (2005). Human capital theory and venture capital firms: Exploring “home runs” and “strike outs”. *Journal of Business Venturing*, 20(1), 1–21.
- Dunne, T., Roberts, M., & Samuelson, L. (1989). The growth and failure of U.S. manufacturing plants. *Quarterly Journal of Economics*, 104, 671–698.
- Ensley, M., Pearson, A., & Amason, A. (2002). Understanding the dynamics of new venture top management teams: Cohesion, conflict, and new venture performance. *Journal of Business Venturing*, 17, 365–386.
- Evans, D., David, S., & Leighton, L. (1989). Some empirical aspects of entrepreneurship. *American Economic Review*, 79(3), 519–535.
- Filippetti, A., & Archibugi, D. (2011). Innovation in times of crisis: National systems of innovation, structure and demand. *Research Policy*, 40, 179–192.
- Franco, A., & Filson, D. (2006). Spin-outs: Knowledge diffusion through employee mobility. *RAND Journal of Economics*, 37(4), 841–860.
- Ganotakis, P. (2012). Founders’ human capital and the performance of UK new technology based firms. *Small Business Economics*, 39, 495–515.
- Gans, J., & Stern, S. (2003). The product market and the market for “ideas”: Commercialization strategies for technology entrepreneurs. *Research Policy*, 32, 333–350.
- Garnsey, E., Stam, E., & Heffernan, P. (2006). New firm growth: Exploring processes and paths. *Industry and Innovation*, 13, 1–20.
- Gartner, W. B. (1985). A conceptual framework for describing the phenomenon of new venture creation. *Academy of Management Review*, 10(4), 696–706.
- Gimmon, E., & Levie, J. (2010). Founder’s human capital, external investment, and the survival of new high-technology ventures. *Research Policy*, 39, 1214–1226.
- Grant, R. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17, 109–122.
- Gries, T., & Van Dung, H. (2014). *Institutional environment, human capital, and firm growth: Evidence from Vietnam*. No. 83. University of Paderborn, CIE Center for International Economics.
- Grilli, L. (2011). When the going gets tough, do the tough get going? The pre-entry work experience of founders and high-tech start-up survival during an industry crisis. *International Small Business Journal*, 29(6), 626–647.
- Grilo, I., & Thurik, R. (2005). Entrepreneurial engagement levels in the European Union. *International Journal of Entrepreneurship Education*, 3(2), 143–168.
- Grilo, I., & Thurik, R. (2008). Determinants of entrepreneurial engagement levels in Europe and the US. *Industrial Corporate Change*, 17(6), 1113–1114.
- Gulati, R., & Higgins, M. (2003). Which ties matter when? The contingent effects of interorganizational partnerships on IPO success. *Strategic Management Journal*, 24, 127–144.
- Halabisky, D., Dreessen, E., & Parsley, C. (2006). Growth in firms in Canada, 1985–1999. *Journal of Small Business and Entrepreneurship*, 19(3), 255–268.
- Halldin, T. (2012). *Firm internationalization and born global firms: On the causes and consequences of export market entry*. Doctoral thesis, KTH, School of Industrial Engineering and Management (ITM), Industrial Economics and Management (Dept.), Economics. ISBN: 978-91-7501-262-9.
- Hallen, B. (2008). The causes and consequences of the initial network positions of new organizations: From whom do entrepreneurs receive investments? *Administrative Science Quarterly*, 53(4), 685–718.
- Haltiwanger, J., Jarmin, R., & Miranda, J. (2013). Who creates jobs? Small versus large versus young. *Review of Economics and Statistics*, 95(2), 347–361.

- Hamilton, B. (2000). Does entrepreneurship pay? An empirical analysis of the returns to self-employment. *Journal of Political Economy*, 108(3), 604–631.
- Haverman, H. (1995). The demographic metabolism of organizations: Industry dynamics, turnover, and tenure distributions. *Administrative Science Quarterly*, 40, 586–618.
- Hayward, M., Shepherd, D., & Griffin, D. (2006). A hubris theory of entrepreneurship. *Management Science*, 52(2), 160–172.
- Headd, B. (2001). *Business success: Factors leading to surviving and closing successfully*. Center for Economic Studies, U.S. Department of Commerce.
- Helfat, C., & Lieberman, M. (2002). The birth of capabilities: Market entry and the importance of pre-history. *Industrial and Corporate Change*, 11, 725–760.
- Henreckson, M., & Johansson, D. (2010). Gazelles as job creators—A survey and interpretation of the evidence. *Small Business Economics*, 35(2), 227–244.
- Hessels, J., Grilo, I., Thurik, R., & Zwan, P. (2011). Entrepreneurial exit and entrepreneurial engagement. *Journal of Evolutionary Economics*, 21, 447–471.
- Hochberg, Y., Ljungqvist, A., & Lu, Y. (2007). Whom you know matters: Venture capital networks and investment performance. *Journal of Finance*, 62(1), 251–301.
- Holtz-Eakin, D., Joulfaian, D., & Rosen, H. (1994). Sticking it out: Entrepreneurial survival and liquidity constraints. *Journal of Political Economy*, 102(11), 53–75.
- Hözl, W. (2009). Is the R&D behaviour of fast-growing SMEs different? Evidence from CIS III data for 16 countries. *Small Business Economics*, 33(1), 59–75.
- Hsu, D. (2004). What do entrepreneurs pay for venture capital affiliation? *Journal of Finance*, 59, 1805–1844.
- Hsu, D. H. (2007). Experienced entrepreneurial founders, organizational capital, and venture capital funding. *Research Policy*, 36(5), 722–741. Elsevier.
- Huang, H.-C., Lai, M.-C., & Lo, K.-W. (2012). Do founders' own resources matter? The influence of business networks on start-up innovation and performance. *Technovation*, 32, 316–327.
- Hull, L., & Arnold, R. (2008). *New Zealand firm growth as change in turnover*. Wellington, NZ: Ministry of Economic Development.
- Hutton, W., & Lee, N. (2012). The City and the cities: Ownership, finance and the geography of recovery. *Cambridge Journal of Regions, Economy and Society*, 5(3), 325–337.
- Jayawarna, D., Jones, O., & Macpherson, A. (2011). New business creation and regional development: Enhancing resource acquisition in areas of social deprivation. *Entrepreneurship and Regional Development*, 23(9/10), 735–761.
- Kato, M., Okamuro, H., & Honjo, Y. (2015). Does founders' human capital matter for innovation? Evidence from Japanese start-ups. *Journal of Small Business Management*, 53, 114–128. <https://doi.org/10.1111/jsbm.12094>.
- Kessler, A., & Frank, H. (2009). Nascent entrepreneurship in a longitudinal perspective: The impact of person, environment, resources and the founding process on the decision to start business activities. *International Small Business Journal*, 27(6), 720–742.
- Klepper, S. (1996). Entry, exit, growth, and innovation over the product life cycle. *American Economic Review*, 86, 562–583.
- Klepper, S. (1997). Industry life cycles. *Industrial and Corporate Change*, 6, 145–181.
- Klepper, S. (2002). The capabilities of new firms and the evolution of the US automobile industry. *Industrial and Corporate Change*, 11(4), 645–666.
- Klepper, S. (2007). Disagreements, spinouts, and the evolution of Detroit as the capital of the U.S. automobile industry. *Management Science*, 53(4), 616–631.
- Klepper, S., & Simons, K. (2005). Industry shakeouts and technological change. *International Journal of Industrial Organization*, 23(1–2), 23–43.
- Klepper, S., & Sleeper, S. (2005). Entry by spinoffs. *Management Science*, 51, 1291–1306.
- Landier, A., & Thesmar, D. (2009). Financial contracting with optimistic entrepreneurs. *Review of Financial Studies*, 22, 117–150.
- Lee, K. (2010). A theory of firm growth: Learning capability, knowledge threshold, and patterns of growth. *Research Policy*, 39, 278–289.

- Lee, J., & Zhang, W. (2011). Financial capital and startup survival. *Academy of Management Proceedings*, 2011(1), 1–6. <https://doi.org/10.5465/ambpp.2011.65869494>.
- Levitt, B., & March, J. (1988). Organizational learning. *Annual Review of Sociology*, 14(1), 319–338.
- Liao, J., Welsch, H., & Moutray, C. (2004). Start-up resources and entrepreneurial discontinuance: The case of nascent entrepreneurs. *Journal of Small Business Strategy*, 19(2), 1–15.
- Littunen, H., & Virtanen, M. (2006). Differentiating growing ventures from non-growth firms. *Entrepreneurship Management*, 2, 93–109.
- Long, C. (2002). Patent signals. *University of Chicago Law Review*, 69, 625–679.
- Mann, R. J., & Sager, T. W. (2007). Patents, venture capital, and software start-ups. *Research Policy*, 36(2), 193–208.
- Markman, G., & Baron, R. (2003). Person-entrepreneurship fit: Why some people are more successful as entrepreneurs than others. *Human Resource Management Review*, 13(2), 281–301.
- Marvel, M., Davis, J., & Sproul, C. (2014). Human capital and entrepreneurship research: A critical review and future directions. *Entrepreneurship Theory and Practice*. <https://doi.org/10.1111/etap.12136>.
- Marvel, M. R., & Lumpkin, G. T. (2007). Technology entrepreneurs' human capital and its effects on innovation radicalness. *Entrepreneurship Theory and Practice*, 31(6), 807–828.
- Mason, C. (2013). *Access to finance: A 'thought piece' for the North East LEP independent economic review*. Retrieved from <http://www.nelep.co.uk/media/2705/Colin-MasonAccess-to-Finance.pdf>
- Mata, J., & Portugal, P. (1994). Life duration of new firms. *Journal of Industrial Economics*, 42, 227–246.
- McGrath, R., & Macmillan, I. (2000). *The entrepreneurial mindset*. Boston, MA: Harvard Business School Press.
- Medrano, E. (2012). *Patent citations, university inventor patents, and survival in the German laser source industry (1960–2005)*. Jena Economic Research Papers 2012-009.
- Meijaard, J., Van Eck, L., & Stam, E. (2007). *Stoppen binnen vijf jaar*. Zoetermeer: EIM.
- Mina, A., Lahr, H., & Hughes, A. (2013). The demand and supply of external finance for innovative firms. *Industrial and Corporate Change*, 22(4), 869–901.
- Mitchell, W. (1994). The dynamics of evolving markets: The effects of business sales and age on dissolutions and divestitures. *Administrative Science Quarterly*, 38, 575–602.
- Mosey, S., & Wright, M. (2007). From human capital to social capital: A longitudinal study of technology based academic entrepreneurs. *Entrepreneurship: Theory and Practice*, 31, 909–935.
- Nightingale, P., & Coad, A. (2013). Muppets and gazelles: Political and methodological biases in entrepreneurship research. *Industrial and Corporate Change*, 23(1), 113–143. <https://doi.org/10.1093/icc/dtt057>.
- Nyberg, A., & Wright, P. (2015). 50 Years of human capital research: Assessing what we know, exploring where we go. *Academy of Management Perspectives*, 29(3), 287–295.
- Painter, M. (2010). Get a job and keep it! High school employment and adult wealth accumulation. *Research in Social Stratification and Mobility*, 28(2), 233–249.
- Parker, S., & Belghitar, Y. (2006). What happens to nascent entrepreneurs? An econometric analysis of the PSED. *Small Business Economics*, 27, 81–101.
- Parker, S., Storey, D., & Van Witteloostuijn, A. (2010). What happens to gazelles? The importance of dynamic management strategy. *Small Business Economics*, 35, 203–226.
- Parsa, H., Self, J., Njite, D., & King, T. (2005). Why restaurants fail. *Cornell Hotel and Restaurant Administration Quarterly*, 46, 304–322.
- Paunov, C. (2012). The global crisis and firms' investments in innovation. *Research Policy*, 41(1), 24–35.
- Penrose, E. (1959). *The theory of the growth of the firm*. Oxford: Oxford University Press.
- Phillips, D. (2002). A genealogical approach to organizational life chances: The parent-progeny transfer among Silicon Valley law firms, 1946–1996. *Administrative Science Quarterly*, 47(3), 474–506.

- Politis, D. (2005). The process of entrepreneurial learning: A conceptual framework. *Entrepreneurship Theory & Practice*, 29(4), 399–424.
- Qian, L., Agarwal, R., & Hoetker, G. (2012). Configuration of value chain activities: The effect of preentry capabilities, transaction hazards, and industry evolution on decisions to internalize. *Organization Science*, 23(5), 1330–1349.
- Rae, D., & Carswell, M. (2001). Towards a conceptual understanding of entrepreneurial learning. *Journal of Small Business and Enterprise Development*, 8(2), 150–158.
- Rauch, A., & Rijdsdijk, S. (2013). The effects of general and specific human capital on long-term growth and failure of newly founded businesses. *Entrepreneurship Theory and Practice*, 37, 923–941.
- Robson, P., Akuetteh, C., Westhead, P., & Wright, M. (2012). Innovative opportunity pursuit, human capital and business ownership experience in an emerging region: Evidence from Ghana. *Small Business Economics*, 39, 603–625.
- Schneider, C., & Veuglers, R. (2010). On young highly innovative companies: Why they matter and how (not) to policy support them. *Industrial and Corporate Change*, 19(4), 969–1007.
- Schreyer, P. (2000). *High-growth firms and employment*. OECD Science, Technology and Industry Working Papers. No. 2000/03.
- Schutjens, V., & Stam, E. (2006). *Starting a new: Entrepreneurial intentions and realizations subsequent to business closure*. Discussion Papers on Entrepreneurship, Growth and Public Policy, No. 2006–10, Max Planck Institute of Economics, Jena.
- Senderovitz, M., Klyver, K., Steffens, P., & Majbritt, E. (2012). Four years on—Are the Gazelles still running? A longitudinal study of firm performance after a period of rapid growth. In *2012 Babson College Entrepreneurial Research Conference, 6–9 July, 2012*, Fort Worth, TX.
- Serneels, P. (2008). Human capital revisited: The role of experience and education when controlling for performance and cognitive skills. *Labour Economics*, 15(6), 1143–1161.
- Shane, S. (2000). Prior knowledge and the discovery of entrepreneurial opportunities. *Organization Science*, 11, 448–469.
- Sharma, A., & Kesner, I. (1996). Diversifying entry: Some ex ante explanations for post-entry survival and growth. *Academy of Management Journal*, 39, 635–677.
- Shepherd, D., & Wiklund, J. (2009). Are we comparing apples with apples or apples with oranges? Appropriateness of knowledge accumulation across growth studies. *Entrepreneurship Theory and Practice*, 33(1), 105–123.
- Shrader, R., & Siegel, D. (2007). Assessing the relationship between human capital and firm performance: Evidence from technology-based new ventures. *Entrepreneurship: Theory and Practice*, 31(6), 893–908.
- Srinivasan, R., Lilien, G., & Rangaswamy, A. (2008). Survival of high tech firms: The effects of diversity of product–market portfolios, patents, and trademarks. *International Journal of Research in Marketing*, 25, 119–128.
- Stam, E. (2005). The geography of gazelles in the Netherlands. *Tijdschrift voor Economische en Sociale Geografie*, 96(1), 121–127.
- Stam, E., & Wennberg, K. (2009). The roles of R&D in new firm growth. *Small Business Economics*, 33(1), 77–89.
- Stam, E., Audretsch, D., & Meijaard, J. (2008). Renascent entrepreneurship. *Journal of Evolutionary Economics*, 18(3–4), 493–507.
- Stuart, T., Hoang, H., & Hybels, R. (1999). Interorganizational endorsements and the performance of entrepreneurial ventures. *Administrative Science Quarterly*, 44, 315–349.
- Sullivan, D., & Marvel, M. (2011). How entrepreneurs' knowledge and network ties relate to the number of employees in new SMEs. *Journal of Small Business Management*, 49, 185–206.
- Tang, J., & Murphy, P. (2012). Prior knowledge and new product and service introductions by entrepreneurial firms: The mediating role of technological innovation. *Journal of Small Business Management*, 50, 41–62.
- Taylor, M. (1999). Survival of the fittest? An analysis of self-employment duration in Britain. *Economic Journal*, 109(March), 140–155.



- Teece, D. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350.
- Teece, D. (2009). *Dynamic capabilities and strategic management: Organizing for innovation and growth*. New York: Oxford University Press.
- Teece, D. (2010a). Technological innovation and the theory of the firm: The role of Enterprise-level knowledge, complementarities, and (dynamic) capabilities. In N. Rosenberg & B. Hall (Eds.), *Handbook of the economics of innovation* (Vol. 1). Amsterdam: North-Holland.
- Teece, D. (2010b). Business models, business strategy and innovation. *Long Range Planning*, 43, 172–194.
- Teece, D. (2014). A dynamic capabilities-based entrepreneurial theory of the multinational enterprise. *Journal of International Business Studies*, 45, 8–37.
- Teece, D., & Pisano, G. (1994). The dynamic capabilities of firms: An introduction. *Industrial and Corporate Change*, 3(3), 537–556.
- Teece, D., Pisano, G., & Shuen, A. (1990). *Firm capabilities, resources, and the concept of strategy*. CCC Working Paper 90-8. Berkeley: Center for Research in Management, University of California.
- Teece, D., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 537–533.
- Tyebee, T., & Bruno, A. (1984). A model of venture capitalist investment activity. *Management Science*, 30(9), 1051–1066.
- Ucbasaran, D., Wright, M., & Westhead, P. (2003). Longitudinal study of habitual entrepreneurs, starters and acquirers. *Entrepreneurship and Regional Development*, 15(3), 207–228.
- Ucbasaran, D., Wright, M., & Westhead, P. (2008). Opportunity identification and pursuit does an entrepreneur's human capital matter? *Small Business Economics*, 30, 153–173.
- Van der Sluis, J., Van Praag, M., & Vijverberg, W. (2005). Entrepreneurship, selection and performance: A meta-analysis of the role of education. *World Bank Economic Review*, 19(2), 225–261.
- Van Gelderen, M., Thurik, R., & Bosma, N. (2006). Success and risk factors in the pre-startup phase. *Small Business Economics*, 26(4), 319–335.
- Verhoeven, W., Gibcus, P., & de Jong-'t Hart, P. (2005). *Bedrijvendynamiek in Nederland: goed of slecht?* Zoetermeer: EIM.
- Wagner, J. (2003). Taking a second chance: Entrepreneurial re-starters in Germany. *Applied Economics Quarterly*, 49(3), 255–227.
- Wagner, S., & Cockburn, I. (2010). Patents and the survival of internet-related IPOs. *Research Policy*, 39, 214–228.
- Weinzimmer, L., Nystron, P., & Freeman, S. (1998). Measuring organizational growth: Issues, consequences and guidelines. *Journal of Management*, 24(2), 235–262.
- Wennberg, K., Wiklund, J., DeTienne, D., & Cardon, M. (2010). Reconceptualizing entrepreneurial exit: Divergent exit routes and their drivers. *Journal of Business Venturing*, 25(4), 361–375.
- Westhead, P., Ucbasaran, D., Wright, M., & Binks, M. (2005). Novice, serial, and portfolio entrepreneur behaviour and contributions. *Small Business Economics*, 25(2), 109–132.
- Wieser, R. (2005). Research and Development, productivity and spillovers: Empirical evidence at the firm level. *Journal of Economic Surveys*, 19(4), 587–621.
- Wiklund, J., & Shepherd, D. (2003). Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. *Strategic Management Journal*, 24, 1307–1314.
- Ziedonis, R. (2004). Don't fence me in: Fragmented Markets for Technology and the patent acquisition strategies of firms. *Management Science*, 50, 804–820.
- Zott, C., & Huy, Q. (2007). How entrepreneurs use symbolic management to acquire resources. *Administrative Science Quarterly*, 52, 70–105.

**Part III**  
**Organizational Challenges for Family**  
**Business**

# The Innovative Performance of Family Businesses: An Essay About Intellectual Capital and Absorptive Capacity

Raysa Geaquinto Rocha and João Leitão

**Abstract** The personal characteristics of the members, the organizational relationships, and the internal procedures need to be managed. Knowledge needs to be acquired, assimilated, transformed, and applied to create organizational value. Then, the relationship between intellectual capital and the absorptive capacity are fundamental. Family businesses, those governed and/or managed by members of the same family throughout the generations, represent more than half of the existing organizations, reaching figures close to 90% in some locations. There is a gap in the research about intellectual capital and the absorptive capacity of a family business; thus it must be explored deeply. The objective of this essay is to relate the previous evidence about the intellectual capital and the absorptive capacity of family businesses for innovative performance, identify previous results and the gap in the literature, present a conceptual model, and propose an agenda for future research. This essay was developed through a literature review. Then, this study contributes to original insights on the role of intellectual capital and absorption capacity in the innovative performance of family businesses.

**Keywords** Intellectual capital · Family business · Family firms · Performance · Innovation · Innovative performance

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## 1 Introduction

The intangible assets of organizations are enhanced due to their potential to create value and competitive advantages (Wexler 2002; Grant 1996). These intangible assets such as knowledge, experiences, routines, and relationships are capable of creating value and represent the organizational intellectual capital (Núñez Ramírez et al. 2017; Wexler 2002; Zahra and George 2002; Cohen and Levinthal 1990).

All knowledge generated through the organizational intellectual capital, namely, the personal characteristics of the members, the organizational relationships, and the internal procedures, need to be managed to create value (Wang and Noe 2010; Argote and Ingram 2000; Grant 1996; Nonaka 1994). The absorptive capacity of the organization is part of this management, its set of routines and processes through which the organization acquires, assimilates, transforms, and applies the knowledge with the purpose of value creation (Zahra and George 2002).

In the context of constant changes, for the organization to remain competitive and prolong its survival, it must have a significant innovative performance (Serrano-Bedia et al. 2016). In other words, the organization must create novelties that add value (Tidd and Bessant 2014). While the absorptive capacity is a condition for the innovative process (Zahra and George 2002), intellectual capital positively influences the innovative performance of organizations (Prod and Carlos 2015).

The focus of this essay is on the gaps in the relationship between intellectual capital and the absorptive capacity of family businesses for innovative performance. Family businesses, those governed and/or managed by members of the same family throughout the generations (Chua et al. 1999), represent more than half of the existing organizations, reaching figures close to 90% depending on the location (Chua et al. 1999; Daspit et al. 2017).

Despite these data, studies with empirical research do not agree on the innovative performance of these organizations (Broekaert et al. 2016; Stenholm et al. 2016; De Massis et al. 2016; Miller et al. 2015). The researches that relate the intellectual capital, the absorptive capacity of family businesses for innovation, are sparse (Ferreira and Ferreira 2017). Therefore, due to the existence of a gap, there is a need to research this issue. Thus, the objective of this essay is to relate the previous evidence about the intellectual capital and the absorptive capacity of family businesses for innovative performance, identify the gap in the literature, and propose agendas for future research.

The essay is organized as follows. It begins with a review of the literature on intellectual capital, its dimensions; followed by the absorptive capacity, its phases; and the presentation of studies on the innovative performance of family businesses. After it is shown the previous evidence and some of the investigation gap observed, an item also composed by a table synthesizes the result of the previous studies. Lastly, in the final considerations, the contributions and limitations are identified, and proposals for future studies related to the identified gap are presented.

## 2 Literature Review

### 2.1 *Organizational Intellectual Capital*

Intellectual capital, a product of the knowledge era (Núñez Ramírez et al. 2017), represents the collective knowledge of the organization (Nghah et al. 2016); it has three dimensions associated with each other: human capital, structural capital, and relational or social capital (Wexler 2002; Zahra and George 2002; Cohen and Levinthal 1990).

Human capital represents the value of the personal characteristics of the members of the organization, such as knowledge, talent, values, creativity, leadership, ability to learn, flexibility, loyalty, proactivity, ability to solve problems, and attitudes. This capital is lost with the exit of the member (Nghah et al. 2016; Wexler 2002; Zahra and George 2002; Cohen and Levinthal 1990). However, such personal characteristics must be separated from the intellectual property belonging to the company and must be protected by contract (Núñez Ramírez et al. 2017). Concerning the human capital of family businesses, which are in a highly changing environment and wish to remain innovative, they must receive long-term investments, whether or not they are family members, to develop a cohesive corporate culture (Miller et al. 2015).

Structural capital, on the other hand, represents the non-human knowledge that remains in the organization even if the members leave it, which refers to the databases, corporate culture, systems, technologies, routines, procedure manuals, and strategies that generate value for the organization. Structural capital is a property of the organization (Núñez Ramírez et al. 2017; Nghah et al. 2016; Wexler 2002; Zahra and George 2002; Cohen and Levinthal 1990).

Relational capital is the most relevant source of competitive advantage (Saleh and Masduki 2016), also called social capital, which is the set of organizational relationships that affect integration, commitment, cooperation, cohesion, connection, and social responsibility (Núñez Ramírez et al. 2017). The organization alone does not get all the resources needed to prosper. So there should be cooperation and forming alliances (Yoo et al. 2016). In family businesses, long-term relationships should be fostered so that innovation is maintained continuously, without disruptions (Miller et al. 2015).

This nature of intellectual capital can also be understood as the actual or potential resources inherent to more or less institutionalized relations of mutual recognition (Bourdieu *apud* Maak 2007). This capital refers exactly to these internal or external organizational relationships (Wexler 2002), focusing on interactions between partners, such as other organizations, customers, suppliers, public administration, and society in general. Partners are considered as key elements for innovation (Vlaisavljevic et al. 2016) and organizational performance (Nahapiet and Ghoshal 1998). In other words, relational capital significantly influences the capacity for innovation and organizational performance (Sulistyo and Siyamtinah 2016). Therefore, organizations should coordinate the different perspectives of intellectual capital to improve their performance and competitive advantage (Lu et al. 2010).

The ability of the organization to cooperate is associated with relational capital; these interactions between partners depend on mutual trust, exchange of information, and mutual commitment (Garcia and Bounfour 2014 *apud* Yoo et al. 2016). Thus, relational capital acts as a bridge facilitating the knowledge sharing between the partners (Kale and Singh 2007 *apud* Yoo et al. 2016). For instance, the intention to learn is a relevant antecedent for organizational learning to occur in alliances; in this case, there is a positive influence of absorptive capacity and relational capital for the learning to be carried out (Yoo et al. 2016).

In order for an organization to manage its knowledge and create value, it is necessary to integrate the dimensions of intellectual capital, that is, human capital allows the transfer of knowledge through structural capital, which is reflected in the relations of the organization (relational capital) (Fierro et al. *apud* Núñez Ramírez et al. 2017).

The organization should be able to store knowledge even if members leave it (Núñez Ramírez et al. 2017; Wexler 2002). For this reason, organizational memory should be built since valuable information is found in inter- and intra-organizational relationships (Wexler 2002). This demand is directly connected to the absorptive capacity of the organization (Yoo et al. 2016). In the next subtopic, a review of the literature on absorptive capacity and its implications on innovative performance are briefly presented.

## ***2.2 Absorptive Capacity and Innovation Performance***

In the 1990s, Cohen and Levinthal (1990) presented the ability of the organization to recognize, assimilate, and apply external information as a critical factor for innovation capacity. In the following decade, Zahra and George (2002) presented a review and reconceptualization of the absorptive capacity as a dynamic capacity when analyzing its multidimensional nature, separated it into two phases, potential (acquisition and assimilation) and performed (transformation and exploitation). In the potential phase, the first two steps take place to achieve the realization, meaning, the final moments in which the absorptive capacity ceases to be potential, becomes realized, and influences the organizational performance (Zahra and George 2002).

The acquisition, the first step to the absorption of knowledge, is the ability of the organization to identify and acquire knowledge and is the initial inference with the primary knowledge. The second step, the assimilation, the understanding of knowledge, occurs through routines and processes that allow the analysis, classification, and interpretation of knowledge acquired. Once the knowledge is understood, internalized, the next step is to transform it into a new knowledge useful to the organization. Finally, the last step for the absorption of knowledge, exploitation, is the ability of the organization to implement, use, this new knowledge in its operations, whether innovating in processes, products, or in organizational management itself (Zahra and George 2002; Andersén 2015).

Applying knowledge to tangible organizational operations is complex and time-consuming (Andersén 2015; Nonaka 1994). The exploitation of knowledge depends on the kind of knowledge that will be absorbed (Ipe 2003; Grant 1996) and is positively related to the stability of the organization (Andersén 2015) and the subsequent change in its performance (Argote and Ingram 2000). On the other hand, access to external knowledge that is beyond the immediate context of the competencies of the organization and the ability to use it in different contexts are fundamental (Omidvar 2013).

The innovative performance of each organization depends on its absorptive capacity, which is positively related to the preexistent knowledge of the members of the organization. The absorptive capacity of the organization is directly linked to the individual capacity of each member (Cohen and Levinthal 1990) because the recipient of knowledge must have the skills and abilities to absorb it efficiently; otherwise, there will be a gap in this absorption (Tang 2011). This process of continuous refinement of knowledge occurs mainly through *learning by doing* (Omidvar 2013).

When the types of intellectual capital are associated with absorptive capacity, it is observed that relational capital has a relevant role in the absorptive capacity of the organization, because its improvement can generate practices that foster the transformation and exploitation of new knowledge (capacity performed), while the expansion of human capital encourages the acquisition and assimilation of new knowledge (potential capacity). Even socialization among the members of the organization is relevant to the realization of their absorptive capacity (Soo et al. 2017).

Therefore, companies with different absorptive capacities also have different levels of innovative performance (Ali et al. 2016; Zahra and George 2002; Cohen and Levinthal 1990). Also, innovative performance is the result of learning and the absorptive capacity of organizations (Ferreira and Ferreira 2017; Lane et al. 2006).

In family businesses, for example, members share memories and similar knowledge, especially regarding the organization, which help the innovative processes and the absorption of knowledge passed from one generation to the next (De Massis et al. 2016; Schmidts and Sheperd 2013). The absorptive capacity is, therefore, a relevant predictor of innovation in family businesses, and they have a recursive relationship (Ferreira and Ferreira 2017).

Studies on family businesses diverge on their innovative performance (Broekaert et al. 2016; Stenholm et al. 2016; De Massis et al. 2016; Miller et al. 2015). For this reason, in the next subtopic, the literature analysis will be deepened, presenting these studies on the innovative performance of family businesses.

### ***2.3 Innovative Performance of Family Businesses***

In a global environment with a rapid technological change, innovation is crucial for the growth and longevity of organizations, regardless of their size, sector, or species

(Serrano-Bedia et al. 2016). Therefore, innovation is something new that generates value for the organization (Tidd and Bessant 2014). Innovation does not occur through a linear process; it is the result of the interaction between the organization and the environment. The ability of the company to achieve the objective through its activities is a way to measure the performance of its innovation (Ferreira and Ferreira 2017).

The organization being a family business is not a barrier to innovation (Leal-Rodriguez et al. 2017). Once the scope of this essay is directed to the innovation performance of family businesses, it is essential to clarify its concept. Chua et al. (1999) present how the business is governed and/or managed with the dominant view of the members of the same family(ies) throughout its generations. There are several other definitions; for example, it is stipulated that the company must be at least two generations within the family (Colli and Larsson 2014).

In these organizations, an adequate level of emotional connection between family and business is needed. Social identity facilitates integration between these areas, and there are three key dimensions to their development (Schmidts and Sheperd 2013): the level of involvement with the family business; shared memories, emotional connection; and the extent of the operation, represented by the number of family generations that the business exists (Schmidts and Sheperd 2013). The stories told by previous generations can be a mechanism to bring new generations closer to the company as well as to open the company to innovation (Kammerlander et al. 2015). This is innovation through tradition in family businesses, in other words, using the old knowledge of previous generations as an opportunity to create new products through a differentiated interpretation (value capture) of the past of the organization (De Massis et al. 2016).

On the one hand, there are characteristics in family businesses that hinder cooperation, such as avoiding risks and changes (Roessl and Rößl 2005). On the other hand, the family business has other characteristics that highlight innovation, such as its family character and entrepreneurship (Leal-Rodriguez et al. 2017) and its adaptability to discontinuous changes (König et al. 2013). Family businesses do have entrepreneurship orientation but need entrepreneurial activity in their strategies to overcome conservatism (Stenholm et al. 2016).

The propensity of family businesses to innovate is related to their purpose, that is, to propagate the internal interests of the family or the desire to create a robust business, those are averse to risk, having difficulty in innovating; these, in turn, invest in the organization, creating social and human capital that will allow innovation and prosperity (Miller et al. 2015). The human elements of these companies, their talents, interactions, and motivations, also indicate the possibility of innovation. Hence, there is a need for constant investment in intellectual capital (family and non-family) to develop and maintain the innovative capacity (Miller et al. 2015).

Corporate governance affects the nature and efficiency of family businesses (Csizmadia et al. 2016; Colli and Larsson 2014). For example, there is a positive relationship between the family nature of the organization and the disclosure of relational capital (Saleh and Masduki 2016). Furthermore, on the one hand, the family's involvement in business might have a negative effect on innovative



performance (Serrano-Bedia et al. 2016), both the family ownership and the generation (Decker and Günther 2017). On the other hand, the flexibility of the family business (Broekaert et al. 2016; König et al. 2013) including the ability to invest more in innovation in moments of calm and high reserves (Liu et al. 2017) affects the innovative performance of family businesses positively.

A crucial moment in the life cycle of family businesses is succession, a time when social and emotional wealth must be transmitted (Makó et al. 2016) and avoid its expropriation with the departure of the founder (Lwango and Coeurderoy 2004). In succession in family businesses, gender is also a relevant factor concerning succession by daughters and the preference for men in succession in family businesses (Hytty et al. 2017). With succession, there is a change in management, and there is an indication that the innovative performance of the organization will be changed (Makó et al. 2016; Csizmadia et al. 2016). The organization must develop a cohesive corporate culture and long-term investments to survive succession while maintaining its innovative performance (Miller et al. 2015).

### 3 Prior Evidence and Research Gap

After the explanations about intellectual capital, absorptive capacity, and innovative performance of family businesses, it can be observed that they are concepts related to each other. Thus, the absorptive capacity is substantially related to the relational capital in what concerns the cooperation for learning (Wexler 2002; Cohen and Levinthal 1990). Absorptive capacity and relational capital influence the innovative performance of organizations (Cohen and Levinthal 1990; Prod and Carlos 2015; Vlaisavljevic et al. 2016; Zahra and George 2002; Chitsazan et al. 2017). In the baseline studies on absorptive capacity, it is clarified that this is a condition for the innovation process (Cohen and Levinthal 1990; Zahra and George 2002).

Family ownership can be a factor of negative influence on innovative performance (Gómez-Mejía et al. 2007; Breton-Miller et al. 2015; Kellermanns et al. 2012; Schulze and Kellermanns 2015; Decker and Günther 2017; Roessl and Rößl 2005; Serrano-Bedia et al. 2016) or not (Broekaert et al. 2016; De Massis et al. 2016; Kidwell et al. 2013; Leal-Rodriguez et al. 2017; Liu et al. 2017; Nordqvist and Melin 2010; Kellermanns et al. 2012).

About the gaps observed in this context, some are highlighted. The cultural context of these companies must be taken into account, as well as the number of generations passed by the organization (De Massis et al. 2016) and your time of activity. The industry also needs to be considered, as there are industries that need constant innovation, while others only take advantage of opportunistic innovation (Makó et al. 2016).

The immigration situation also presents itself as a relevant factor for the innovative performance of family businesses (Adendorff and Halkias 2014). There is also a need to differentiate between voluntary and forced immigration as a factor to entrepreneurship and innovation, as well as the degree of cultural difference between

countries. Another observed gap is in the values of the family business, not only the moral values but also the ethical, spiritual, ecological, economic, and political values (Pedro 2014) because these values can influence the vision and innovative performance of the organization, as well as its capacity to absorb knowledge and its alliances. Most of the studies used the qualitative methodology utilizing a case study. It is also the most suitable method for analyzing complex situations and subjective contexts (Yin 2013; Godoy 1995) like family businesses. However, because of such gaps and divergences in the results of the case studies, there is a need to solidify the theoretical basis.

The relations are even clearer in the following table, which elucidates in a diachronic vision the studies about the influence of the intellectual capital on the innovative performance, the influence of the absorptive capacity on the innovative performance, and the innovative performance of family business (Table 1).

## 4 Conclusion

This essay was developed through a literature review. In the initial subtopics, it was presented that the absorptive capacity, as well as the social or relational capital, also influences the innovative performance of organizations (Chitsazan et al. 2017; Vlaisavljevic et al. 2016; Prod and Carlos 2015; Zahra and George 2002; Cohen and Levinthal 1990).

As far as family businesses are concerned, research shows that they are entrepreneurial and that they are focused on innovation (Leal-Rodriguez et al. 2017; Liu et al. 2017; Broekaert et al. 2016; De Massis et al. 2016; Kidwell et al. 2013; Kellermanns et al. 2012; Nordqvist and Melin 2010). The family ownership or if the organization has the influence of the family on management hinders its innovation performance (Decker and Günther 2017; Serrano-Bedia et al. 2016; Schulze and Kellermanns 2015; Kellermanns et al. 2012; Breton-Miller et al. 2015; Gómez-Mejía et al. 2007; Roessl and Röbl 2005).

Hypotheses about the impact of each variable on the innovative performance of family businesses emerge. The role of absorptive capacity is not yet clear, i.e., whether it is moderating, mediating, or both simultaneously (Muller et al. 2005). For this reason, hypothesis 4 below is also necessary to identify whether the absorptive capacity affects the magnitude, direction, and/or strength of the relationship between intellectual capital and the innovative performance of family businesses (Fig. 1).

**H1** Intellectual capital influences the innovative performance of family businesses.

**H2** Intellectual capital influences the absorptive capacity of family businesses.

**H3** The absorptive capacity influences the innovative performance of family businesses.

**Table 1** Gaps and results of previous studies

	Gaps	Author/year	Results
Influence of intellectual capital on innovative performance	How should the family business manage its investments in human capital in the long term, so as not to lose the value invested and the knowledge acquired with the possible exit of the member before the actual return to the organization?	Chitsazan et al. (2017)	Intellectual capital significantly affects organizational innovation. The combination of social, structural, and cultural factors shapes innovation in organizations based on knowledge and high technology
		Vlaisavljevic et al. (2016)	Partnerships are key elements of innovation. The organization should diversify partners into its alliances to improve innovative performance when alliance partners share coded knowledge
	What perspectives of intellectual capital should receive more attention from family businesses to improve their innovative performance?	Prod and Carlos (2015)	Social capital has a positive influence on organizational innovation
		Miller et al. (2015)	Family businesses that persistently seek innovation in changing environments must make long-term investments in human capital, whether family or not, to develop a cohesive corporate culture and broad mentoring by generations before those that will succeed the organization
		Lu et al. (2010)	Organizations must coordinate the different perspectives of intellectual capital to improve their performance and competitive advantage
		Nahapiet and Ghoshal (1998)	Differences between organizations, including in performance, may represent differences in their ability to create and exploit social capital

(continued)

**Table 1** (continued)

	Gaps	Author/year	Results
Influence of absorptive capacity on innovative performance	What is the influence of culture on the absorptive capacity of family businesses?	Ferreira and Ferreira (2017) and Lane et al. (2006)	Innovative performance is the result of learning and the absorptive capacity of organizations
		Moutinho (2016)	Absorptive capacity is the fastest and most balanced means for development in environments that are adverse to innovation
		Ali et al. (2016)	Companies wishing to engage in innovation processes should be aware of their absorptive capacity. Its dimensions should be seen in a complementary and sequential and non-cumulative way
	What is the influence of the family company's operating time (in generations) on the development of its absorptive capacity?	Zahra and George (2002)	The absorptive capacity is a condition for the innovative process; companies with different absorptive capacities also have different levels of innovative performance
		Roessl and Röbl (2005)	In family businesses, some characteristics hinder cooperation, such as avoiding risks and changes
		Van den Bosch et al. (1999)	Innovation produces knowledge that becomes part of the absorptive capacity of the organization and increases the frequency of its innovation in a given area, the greater the absorptive capacity in this same area
		Cohen and Levinthal (1990)	The ability of the organization to recognize, assimilate, and apply external information (absorptive capacity) is a critical factor for innovative capacity

(continued)

**Table 1** (continued)

	Gaps	Author/year	Results
Innovative performance of family businesses	What is the difference between the innovative performance of a service family business and a production family business?	Hernández-Perlines and Xu (2018)	The absorptive capacity of family businesses mediates in the increase in profits in innovation for internationalization
		Leal-Rodriguez et al. (2017)	Being a family business is no barrier to innovation. The family business has characteristics that highlight innovation, such as its own family and entrepreneurial character
		Ferreira and Ferreira (2017)	The absorptive capacity is a relevant predictor of innovation in family businesses. Innovation and absorptive capacity have a recursive relationship
		Liu et al. (2017)	When there is calm and reserve for investments, family businesses show greater investment in innovation
		Decker and Günther (2017)	Both the degree of family ownership and generation can negatively influence the innovative performance of the family business
		Serrano-Bedia et al. (2016)	Family involvement in business may have made the innovative performance of the family business negative
	What are the influences of the succession process of family businesses on their innovative performance?	Broekaert et al. (2016)	Despite making less investment in research and development, the flexibility of the family business enables its success in developing new products, that is, in its performance in innovation

(continued)

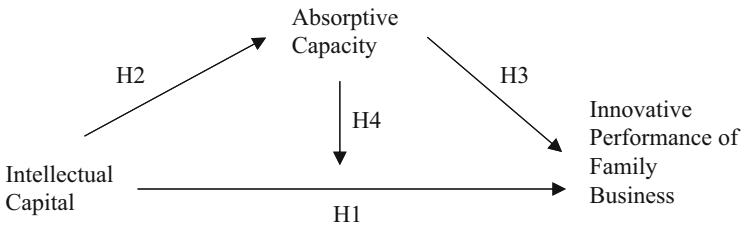
**Table 1** (continued)

	Gaps	Author/year	Results
	What are the cultural factors that most foster innovation in family businesses?	Stenholm et al. (2016)	Family businesses do have entrepreneurship orientation, but they need entrepreneurial activity in their strategies to overcome conservatism
		De Massis et al. (2016)	Family businesses can innovate through tradition, that is, take advantage of the old knowledge of previous generations as an opportunity to create new products through a differentiated interpretation (value capture) of the history of the organization
		Csizmadia et al. (2016)	The family business should develop a succession and knowledge-sharing plan to ensure a smooth succession between generations to preserve its competitive advantages and performance
		Makó et al. (2016)	The context of need and opportunity to undertake family businesses is analyzed, emphasizing that the transfer of intangibles of the family business in the succession process is more important than the transfer of physical assets
	What is the role of the leader in shifting from rigid mental models to more open models for innovation in family businesses?	Miller et al. (2015)	Family businesses must invest in the organization, creating social and human capital that will enable them to innovate and thrive. The human element of these companies, their talents, interactions, and motivations, also indicate the possibility of innovation

(continued)

**Table 1** (continued)

Gaps	Author/year	Results
	Sánchez-Sellero et al. (2014)	Family control reduces the capacity to absorb spillovers from foreign direct investment
	Schulze and Kellermanns (2015), Kellermanns et al. (2012), Breton-Miller et al. (2015), and Gómez-Mejía et al. (2007)	Family businesses have rigid mental models that hinder innovation
	Nordqvist and Melin (2010)	Family businesses are more creative and innovative than non-family businesses



**Fig. 1** Conceptual model of the relationship between intellectual capital and the absorptive capacity of family businesses for innovation performance

**H4** The absorptive capacity has a moderating influence on the relationship between intellectual capital and innovative performance of family businesses.

The research about the relationship between intellectual capital and the absorptive capacity of family businesses for innovation performance must be improved. Therefore, the relationship between intellectual capital, absorptive capacity, and innovative performance in family businesses needs the attention of researchers so that there are relevant advances.

The main limitation of this research lies in its method, mainly due to the subjectivity of the author and lack of empirical testing. Therefore, regarding the scope of this essay, the test of the proposed model is suggested, and the effect of external influences on this relationship should be tested, such as values, culture, gender, industry, family hierarchies, and the number of generations. Qualitative methodologies are indicated to test the proposed model. For example, case studies on the relationship between intellectual capital and the absorptive capacity in the innovative performance of family businesses because it is a method to deeply understand complex events and contexts (Yin 2013; Godoy 1995).

Afterward, based on the previous studies that make up this study and, on the gaps, observed in the literature, the following suggestions are proposed for future researches:

1. The role of organizational values in the relationship between the absorptive capacity and the innovative performance of family businesses.
2. How the intellectual capital of immigrant family businesses influences their innovative performance.
3. The influence of the values on the comparison between the innovative performance of immigrant and non-immigrant family businesses.
4. The influence of the gender of the CEO on the innovative performance after the succession process in a family business.
5. The above studies should also be carried out in family businesses in different cultural, geographical, sectoral, and financial contexts.
6. Regarding the methodology, other methodologies should be explored, mainly longitudinal studies on the changes in the innovative performance of family businesses over the generations, principally on the influence of CEO exchanges.

## References

- Adendorff, C., & Halkias, D. (2014). Leveraging ethnic entrepreneurship, culture and family dynamics to enhance good governance and sustainability in the immigrant family business. *Journal of Developmental Entrepreneurship*, 19(02), 1450008. <https://doi.org/10.1142/S1084946714500083>.
- Ali, M., Seny Kan, K. A., & Sarstedt, M. (2016). Direct and configurational paths of absorptive capacity and organizational innovation to successful organizational performance. *Journal of Business Research*, 69(11), 5317–5323. <https://doi.org/10.1016/j.jbusres.2016.04.131>.
- Andersén, J. (2015). The absorptive capacity of family firms: How familiness affects potential and realized absorptive capacity. *Journal of Family Business Management*, 5(1), 73–89. <https://doi.org/10.1108/02683940010305270>.
- Argote, L., & Ingram, P. (2000). Knowledge transfer: A basis for competitive advantage in firms. *Organizational Behavior and Human Decision Processes*, 82(1), 150–169. <https://doi.org/10.1006/obhd.2000.2893>.
- Breton-Miller, Le I., Miller, D., & Bares, F. (2015). Governance and entrepreneurship in family firms: Agency, behavioral agency and resource-based comparisons. *Journal of Family Business Strategy*, 6(1), 58–62. <https://doi.org/10.1016/j.jfbs.2014.10.002>.
- Broekaert, W., Andries, P., & Debackere, K. (2016). Innovation processes in family firms: The relevance of organizational flexibility. *Small Business Economics*, 47(3), 771–785. <https://doi.org/10.1007/s11187-016-9760-7>.
- Chitsazan, H., Bagheri, A., & Yusefi, A. (2017). Intellectual, psychological, and social capital and business innovation: The moderating effect of organizational culture. *Iranian Journal of Management Studies*, 10(2), 307–333. <https://doi.org/10.22059/ijms.2017.215054.672249>.
- Chua, J. H., Chrisman, J. J., & Sharma, P. (1999). Defining the family business by behavior. *Entrepreneurship Theory and Practice*, 23(4), 19–39. <https://doi.org/10.1177/104225879902300402>.
- Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1), 128–152.



- Colli, A., & Larsson, M. (2014). Family business and business history: An example of comparative research. *Business History*, 56(1), 37–53. <https://doi.org/10.1080/00076791.2013.818417>.
- Csizmadia, P., Makó, C., & Heidrich, B. (2016). Managing succession and knowledge transfer in family businesses: Lessons from a comparative research. *Vezetéstudomány/Budapest Management Review*, 47(11), 59–69. <https://doi.org/10.14267/VEZTUD.2016.11.07>.
- Daspit, J. J., Chrisman, J. J., Sharma, P., Pearson, A. W., & Long, R. G. (2017). A strategic management perspective of the family firm: Past trends, new insights, and future directions. *Journal of Managerial Issues*, XXIX(1), 6–29.
- De Massis, A., Frattini, F., Kotlar, J., Petruzzelli, A. M., & Wright, M. (2016). Innovation through tradition: Lessons from innovative family businesses and directions for future research. *Academy of Management Perspectives*, 30(1), 93–116. <https://doi.org/10.5465/amp.2015.0017>.
- Decker, C., & Günther, C. (2017). The impact of family ownership on innovation: Evidence from the German machine tool industry. *Small Business Economics*, 48(1), 199–212. <https://doi.org/10.1007/s11187-016-9775-0>.
- Ferreira, G. C., & Ferreira, J. J. M. (2017). Absorptive capacity: An analysis in the context of Brazilian family firms. *RAM. Revista de Administração Mackenzie*, 18(1), 174–204. <https://doi.org/10.1590/1678-69712017/administracao.v18n1p174-204>.
- Godoy, A. S. (1995). Pesquisa Qualitativa Tipos Fundamentais. *Revista de Administração de Empresas*, 35(3), 20–29.
- Gómez-Mejía, L. R., Takács Haynes, K., Núñez-Nickel, M., Jacobson, K. J. L., & Moyano-Fuentes, J. (2007). Socioemotional wealth and business risks in family-controlled firms: Evidence from Spanish olive oil mills. *Administrative Science Quarterly*, 52(1), 106–137. <https://doi.org/10.2189/asqu.52.1.106>.
- Grant, R. (1996). Toward a knowledge based theory of the firm. *Strategic Management Journal*, 17(17), 109–122. <https://doi.org/10.2307/2486994>.
- Hernández-Perlines, F., & Xu, W. (2018). Conditional mediation of absorptive capacity and environment in international entrepreneurial orientation of family businesses. *Frontiers in Psychology*, 9, 1–14. <https://doi.org/10.3389/fpsyg.2018.00102>.
- Hytti, U., Alsos, G. A., Heinonen, J., & Ljunggren, E. (2017). Navigating the family business: A gendered analysis of identity construction of daughters. *International Small Business Journal*, 35(6), 665–686. <https://doi.org/10.1177/0266242616675924>.
- Ipe, M. (2003). Knowledge sharing in organizations: A conceptual framework. *Human Resource Development Review*, 2(4), 337–359. <https://doi.org/10.1177/1534484303257985>.
- Kammerlander, N., Dessì, C., Bird, M., Floris, M., & Murru, A. (2015). The impact of shared stories on family firm innovation: A multicase study. *Family Business Review*, 28(4), 332–354. <https://doi.org/10.1177/0894486515607777>.
- Kellermanns, F. W., Eddleston, K., Sarathy, R., & Murphy, F. (2012). Innovativeness in family firms: A family influence perspective. *Small Business Economics*, 38(1), 85–101. <https://doi.org/10.1007/s11187-010-9268-5>.
- Kidwell, R. E., Eddleston, K. A., Cater, J. J., & Kellermanns, F. W. (2013). How one bad family member can undermine a family firm: Preventing the Fredo effect. *Business Horizons*, 56(1), 5–12. <https://doi.org/10.1016/j.bushor.2012.08.004>.
- König, A., Kammerlander, N., & Enders, A. (2013). The family innovator's dilemma: How family influence affects the adoption of discontinuous technologies by incumbent firms. *Academy of Management Review*, 38(3), 418–441. <https://doi.org/10.5465/amr.2011.0162>.
- Lane, P. J., Koka, B., & Pathak, S. (2006). The reification of absorptive capacity: A critical review and rejuvenation of the construct. *Academy of Management Review*, 31(4), 833–863. <https://doi.org/10.5465/AMR.2006.22527456>.
- Leal-Rodríguez, A. L., Peris-Ortiz, M., & Leal-Millan, A. G. (2017). Fostering entrepreneurship by linking organizational unlearning and innovation: The moderating role of family business. *Management International*, 21(2), 86–94. Retrieved from <http://echo.louisville.edu/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=122516548&>

- site=ehost-live%0Ahttps://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=122516548&site=ehost-live.
- Liu, Y., Chen, Y.-J., & Wang, L. C. (2017). Family business, innovation and organizational slack in Taiwan. *Asia Pacific Journal of Management*, 34(1), 193–213. <https://doi.org/10.1007/s10490-016-9496-6>.
- Lu, W. M., Wang, W. K., Tung, W. T., & Lin, F. (2010). Capability and efficiency of intellectual capital: The case of fabless companies in Taiwan. *Expert Systems with Applications*, 37(1), 546–555. <https://doi.org/10.1016/j.eswa.2009.05.031>.
- Lwango, A. B. R., & Coeurderoy, R. (2004). *El capital social de la empresa familiar y la sucesion empresarial: un enfoque teorico*.
- Maak, T. (2007). Responsible leadership, stakeholder engagement, and the emergence of social capital. *Journal of Business Ethics*, 74(4), 329–343. <https://doi.org/10.1007/s10551-007-9510-5>.
- Makó, C., Csizmadia, P., & Heidrich, B. (2016). Succession in the family business: Need to transfer the ‘socioemotional wealth’ (Sew). *Vezetéstudomány/Budapest Management Review*, 47(11), 16–28. <https://doi.org/10.14267/VEZTUD.2016.11.03>.
- Miller, D., Wright, M., Le Breton-Miller, I., & Scholes, L. (2015). Resources and innovation in family businesses. *California Management Review*, 58(1), 20–41. <https://doi.org/10.1525/cm.2015.58.1.20>.
- Moutinho, R. F. F. (2016). Absorptive capacity and business model innovation as rapid development strategies for regional growth. *Investigacion Economica*, 75(295), 157–202. <https://doi.org/10.1016/j.inveco.2016.03.005>.
- Muller, D., Judd, C. M., & Yzerbyt, V. Y. (2005). When moderation is mediated and mediation is moderated. *Journal of Personality and Social Psychology*, 89(6), 852–863. <https://doi.org/10.1037/0022-3514.89.6.852>.
- Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *The Academy of Management Review*, 23(2), 242–266. <https://doi.org/10.2307/259373>.
- Ngah, R., Salleh, Z., Ab Wahab, I., & Azman, N. A. (2016). Intellectual capital, knowledge management and sustainable competitive advantage on SMEs in Malaysia. In *Proceedings of the International Conference on Intellectual Capital, Knowledge Management & Organizational Learning* (2000), pp. 348–356. Retrieved from <https://liverpool.idm.oclc.org/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=118716679&site=eds-live&scope=site>
- Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization Science*, 5(1), 14–37. <https://doi.org/10.1287/orsc.5.1.14>.
- Nordqvist, M., & Melin, L. (2010). Entrepreneurial families and family firms. *Entrepreneurship & Regional Development*, 22(3–4), 211–239. <https://doi.org/10.1080/08985621003726119>.
- Núñez Ramírez, M. A., Nunez, J., Alejandro Banegas Rivero, R., & Nélida Sánchez Bañuelos, M. (2017). Structural relationship among intellectual capital dimensions. *International Journal of Advanced Corporate Learning*, 10(1), 33–44. <https://doi.org/10.3991/ijac.v10i1.6436>. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=122257582&lang=pt-br&site=ehost-live>
- Omidvar, O. (2013). Revisiting absorptive capacity: Literature review and a practice-based extension of the concept. In *35th DRUID Celebration Conference*, 31. <https://doi.org/10.2139/ssrn.1802696>.
- Pedro, A. P. (2014). Ética, Moral, Axíologia E Valores: Confusões E Ambiguidades Em Torno De Um Conceito Comum. *Kriterion: Revista de Filosofia*, 55, 483–498. <https://doi.org/10.1590/S0100-512X2014000200002>.
- Prod, G., & Carlos, S. (2015). *Capital social em rede organizacional: Uma análise de suas dimensões explicativas*.
- Roessl, D., & Röbl, D. (2005). Family businesses and interfirm cooperation. *Family Business Review*, 18(3), 203–214. <https://doi.org/10.1111/j.1741-6248.2005.00042.x>.

- Saleh, N. M., & Masduki, S. B. (2016). The influence of corporate governance on relational capital disclosure among high growth technology companies. *Malaysian Accounting Review*, 15(1), 29–62.
- Sánchez-Sellero, P., Rosell-Martínez, J., & García-Vázquez, J. M. (2014). Absorptive capacity from foreign direct investment in Spanish manufacturing firms. *International Business Review*, 23(2), 429–439. <https://doi.org/10.1016/j.ibusrev.2013.06.006>.
- Schmidts, T., & Sheperd, D. (2013). Social identity theory and the family business: A contribution to understanding family business dynamics. *Small Enterprise Research*, 20(2), 76–86.
- Schulze, W. S., & Kellermanns, F. W. (2015). Reifying socioemotional wealth. *Entrepreneurship Theory and Practice*, 39(3), 447–459. <https://doi.org/10.1111/etap.12159>.
- Serrano-Bedia, A. M., López-Fernández, M. C., & Garcia-Piqueres, G. (2016). Analysis of the relationship between sources of knowledge and innovation performance in family firms. *Innovations*, 18(4), 489–512. <https://doi.org/10.1080/14479338.2016.1233826>.
- Soo, C., Tian, A. W., Teo, S. T. T., & Cordery, J. (2017). Intellectual capital-enhancing HR, absorptive capacity, and innovation. *Human Resource Management*, 56(3), 431–454. <https://doi.org/10.1002/hrm.21783>.
- Stenholm, P., Pukkinen, T., & Heinonen, J. (2016). Firm growth in family businesses—the role of entrepreneurial orientation and the entrepreneurial activity. *Journal of Small Business Management*, 54(2), 697–713. <https://doi.org/10.1111/jsbm.12166>.
- Sulistyo, H., & Siyamtinah. (2016). Innovation capability of SMEs through entrepreneurship, marketing capability, relational capital and empowerment. *Asia Pacific Management Review*, 21(4), 196–203. <https://doi.org/10.1016/j.apmrv.2016.02.002>.
- Tang, F. (2011). Knowledge transfer in intra-organization networks. *Systems Research and Behavioral Science*, 282, 270–282. <https://doi.org/10.1002/sres>.
- Tidd, J., & Bessant, J. (2014). *Strategic innovation management*. Chichester: Wiley.
- Van Den Bosch, F. A., Volberda, H. W., & Boer, M. D. (1999). Coevolution of firm absorptive capacity and knowledge environment: Organizational forms and combinative capabilities. *Organization Science*, 10(5), 551–568. <https://doi.org/10.1287/orsc.10.5.551.Vega-Jurado>.
- Vlaisavljevic, V., Cabello-Medina, C., Ana, P., & Pérez-Luño, A. (2016). Coping with diversity in alliances for innovation: The role of relational social capital and knowledge codifiability. *British Journal of Management*, 27(2), 304–322. <https://doi.org/10.1111/1467-8551.12155>.
- Wang, S., & Noe, R. A. (2010). Knowledge sharing: A review and directions for future research. *Human Resource Management Review*, 20(2), 115–131. <https://doi.org/10.1016/j.hrmr.2009.10.001>.
- Wexler, M. N. (2002). Organizational memory and intellectual capital. *Journal of Intellectual Capital*, 3(4), 393–414. <https://doi.org/10.1108/14691930210448314>.
- Yin, R. K. (2013). *Case study research: Design and methods* (4th ed.). Los Angeles, CA: Sage.
- Yoo, S. J., Sawyerr, O., & Tan, W. L. (2016). The mediating effect of absorptive capacity and relational capital in alliance learning of SMEs. *Journal of Small Business Management*, 54, 234–255. <https://doi.org/10.1111/jsbm.12299>.
- Zahra, S. A., & George, G. (2002). Absorptive capacity: A review, reconceptualization, and extension. *Academy of Management Review*, 17(2), 185–203. <https://doi.org/10.5465/AMR.2002.6587995>.

# Family Management and Firm Performance: The Interaction Effect of Technological Innovation Efficiency

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**Abstract** Understanding the relationship between family management and firm performance has emerged as one of the most prominent issues for both scholars and professionals in the family firm research field. This chapter aims to shed light on this theme by analyzing how family members in top management teams (TMT) impact on firm performance. Moreover, this chapter adds the effect of an interaction factor that has become essential for the improvement of firms' competitiveness: technological innovation efficiency. By conducting a panel data analysis on 1154 observations of private manufacturing firms over the period 2010–2015, the findings reveal a negative impact of family members in TMT on firm performance. The empirical analysis also reveals that technological innovation efficiency weakens the negative effect of family presence in TMT on firm performance.

**Keywords** Family management · Firm performance · Technological innovation efficiency · Upper echelon · Socioemotional wealth

## 1 Introduction

Firm performance is essential to guarantee firm success and survival (Diéguez-Soto et al. 2015; Martínez-Romero 2018). However, and notwithstanding the importance of family firms worldwide (Family Firm Institute 2018; La Porta et al. 1999; Zellweger 2017), the existing research regarding the influence of family firms' characteristics on firm performance is far from offering conclusive results (Basco 2013; De Massis et al. 2015; López-Delgado and Diéguez-Soto 2015).

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Recent studies have focused on how family involvement in management impacts on firm performance (Diéguez-Soto et al. 2019; Sciascia et al. 2014). Family managers, and individual family members in top management teams (hereafter TMT), as the dominant coalition in family firms (Chrisman et al. 2012; Chua et al. 1999), are in charge of strategic decision-making, having a determining influence on performance outcomes.

The impact of family TMT members on performance outcomes could be justified in the light of both the upper echelon (Hambrick and Mason 1984) and the socioemotional wealth (Gómez-Mejía et al. 2007) theories. On the one hand, the upper echelon theory states that TMT members' behavior and characteristics are important, influential factors of performance outcomes (Certo et al. 2006; Kor 2006). On the other hand, it is widely accepted that family TMT members take strategic decisions considering not only financial objectives but also noneconomic goals (Astrachan and Jaskiewicz 2008; Martínez-Romero and Rojo-Ramírez 2017; Zellweger and Astrachan 2008), influencing their firms' performance.

Despite the existing studies analyzing the direct impact of family management on performance outcomes (Sciascia and Mazzola 2008; Sciascia et al. 2014), there is scarce previous literature using the number of family TMT members to measure family management. Moreover, there is also a lack of prior research analyzing specific factors that moderate the relationship between family TMT members and firm performance in private firms. Therefore, in an attempt to deepen in such relationships, this chapter introduces a continuous variable to measure family management and a moderating factor which may well be helpful to explain the current findings. Specifically, the effect of technological innovation efficiency (hereafter TI efficiency) was included as an additional element that may influence the impact of family TMT members on firm performance. We contend that family firm research should essentially consider another factor, namely, TI efficiency, which may encourage family managers to start changes in the way the strategic innovation process is developed, with the final goal of enhancing performance outcomes.

Thereby, this chapter addresses a twofold research question. First, how do family TMT members influence performance in the context of private firms? Second, does TI efficiency moderate the expected relationship between family TMT members and firm performance? To answer these questions, an empirical analysis is developed utilizing a longitudinal dataset comprising 1154 observations of Spanish manufacturing firms over the period 2010–2015. Spain is a fascinating context for analyzing the effect of family TMT members on firm performance, because the family presence in the TMT of Spanish firms is around 70%, meanwhile in 51.6% of Spanish family firms, all TMT members belong to the family (IEF & Red de Cátedras de Empresa Familiar 2015, 2018).

This chapter offers relevant contributions to the literature. First, we answer the call for further research on the family management-performance relationship in the context of private firms (Sciascia et al. 2014; Zattoni et al. 2015). Specifically, we investigate the influence of family TMT members on performance outcomes (Ling and Kellermanns 2010). At this respect, we go beyond previous research which has mainly used a binary measure of family involvement in management (e.g., Diéguez-

Soto et al. 2018; Rojo-Ramírez and Martínez-Romero 2018) and employ a continuous variable to report the family presence in TMT, counting the number of family members in top management positions. This is of utmost interest because it allows disclosing heterogeneity among family firms. Second, we surpass the conceptual frame that analyzes the direct effect of family involvement in management on firm performance, and we introduce TI efficiency as a moderator of the abovementioned relationship. In such a way, we investigate how family presence in TMT interacts with TI efficiency in influencing firm performance. Notwithstanding prior research has examined different factors (Diéguez-Soto et al. 2019; Kellermanns et al. 2012) that may influence the family presence in TMT on firm performance, to the best of the authors' knowledge, no research has analyzed when and under what conditions TI efficiency influences such relationship.

The chapter is structured as follows. Section 2 introduces the theoretical foundations and hypotheses development. Data and methodology are depicted in Sect. 3, meanwhile, Sect. 4 exhibits empirical results. Finally, the discussion of our findings, the limitations, and future research and the conclusions are exposed.

## 2 Theoretical Foundations

### 2.1 *Family Presence in Top Management Team and Firm Performance*

There is no doubt that family firms present peculiar features conditioning their performance outcomes (Arosa et al. 2010; Arrondo-García et al. 2016), due to the intermeshing of the family and the business (Berrone et al. 2010, 2012; Zellweger 2017). As family involvement in the firm increases, so does the overlap between the family and the business (Le Breton-Miller et al. 2011).

Specifically, family presence in management is an important conditioning of firm performance (Diéguez-Soto et al. 2019), since it is an expression of the family's ability to influence the firm's outcomes (De Massis et al. 2014).

Nevertheless, despite the great deal of attention that the relationship between family involvement (in management) and firm performance has received, results are far from being conclusive (Basco 2013; De Massis et al. 2015; Sciascia et al. 2014). Most of the existing research has focused on large (e.g., Dyer 2006; Kammerlander et al. 2015) and public (e.g., Diéguez-Soto et al. 2019) companies. However, prior studies do not assure that results found for public firms could hold for private businesses (Martínez-Romero et al. 2020; Miller et al. 2007). Among those studies analyzing the family management-firm performance relationship in private firms, the existing results reveal both a positive influence (e.g., Gallucci et al. 2015) and a negative influence (e.g., Sciascia and Mazzola 2008) of family managers on firms' outcomes.

In any case, what is clear is that family members present in the firm management, and, namely, in the TMT, belong to the dominant coalition of the firm and thus exert significant influence on organizational outcomes (Hambrick and Mason 1984). Family managers have been demonstrated to be the most important decision-makers within the context of family firms (Vandekerkhof et al. 2015). In this vein, the upper echelon theory states that TMT members' experiences, attitudes, and beliefs drive strategic decision-making (Cyert and March 1963; Hambrick and Mason 1984). Namely, the beliefs, values, and goals of TMT members will influence the implementation of strategies and, consequently, the firms' outcomes.

Moreover, in a family firm context, family's presence in the TMT leads to peculiar performance outcomes due to the overlapping of economic and noneconomic goals, which rises as a primary driver in guiding family firms' strategic choices (Gómez-Mejía et al. 2007). Specifically, family managers normally overweigh emotional considerations over purely financial objectives (Vandekerkhof et al. 2015; Zellweger et al. 2011). Thus, decision-making within family-managed firms is highly influenced by noneconomic objectives, captured by SEW, which may conduct family managers toward the fulfillment of affective needs, rather than acting under effectiveness principles (Martínez-Romero and Rojo-Ramírez 2017).

Accordingly, gains or losses in SEW become the pivotal frame of reference that family firms use to make strategic decisions (Berrone et al. 2012; Gómez-Mejía et al. 2007; Martínez-Romero and Rojo-Ramírez 2016), and family managers would avoid strategic choices that are perceived as threats to their SEW. For example, family managers are reluctant to allow new members from outside the family to take control over strategic decisions as this involves losing control of their firms (Gómez-Mejía et al. 2007, 2010). Therefore, even though collaboration networks and relationships with external stakeholders might well be associated with improved performance (De Massis et al. 2013b; Sorenson 1999), family managers perceive these strategies as a loss of control over their firms and as a cession of discretionary power over outsiders. These concerns may hinder collaborative relationships with external partners (De Massis et al. 2013a; Manzaneque et al. 2020), limiting the possibilities of obtaining performance outcomes.

Moreover, family managers' desire to maintain their SEW might lead to a lack of professionalism in the firm, since firm managers may be selected based on nepotism or altruism rather than on meritocracy principles (Llach and Nordqvist 2010; Poutziouris 2001). Problems related to self-control and altruism result in higher agency costs (Schulze et al. 2001) while also increasing the difficulty of monitoring the firm performance (Dyer 2006). That is, whether nepotism is the accepted norm, incompetent family members might be placed in key management positions, thus jeopardizing firm performance (Manzaneque et al. 2018).

Therefore, family managers in order to maintain the control of their firms and, namely, to preserve their SEW may act under nonpurely financial ideals (Martínez-Romero et al. 2020; Martínez-Romero and Rojo-Ramírez 2017), prioritizing family over economic goals (Chrisman et al. 2012; Martínez-Romero et al. 2020; Rojo-Ramírez and Martínez-Romero 2018). Furthermore, as the number of family



members in management increases, noneconomic goals acquire greater relevance over economic objectives. Thus, our first hypothesis is:

**Hypothesis 1** A higher presence of family members in the firm TMT exerts a negative influence on firm performance.

## 2.2 *The Moderating Influence of Technological Innovation Efficiency*

We have previously hypothesized that firms with a higher family presence in TMT are likely to diminish their performance outcomes. Herein, we argue that this relationship might be moderated by TI efficiency.

Prior research reveals that TI efficiency is a fundamental factor in the obtaining of superior incomes (Wang 2007) and the improvement of firms' competitiveness (Gao and Chou 2015). TI efficiency is defined as the relative capability of a firm to achieve TI outputs given a certain quantity of TI inputs (Cruz-Cázares et al. 2013; Manzanque et al. 2020). Furthermore, Cruz-Cázares et al. (2013) showed that in a complex and long-term innovation process, the efficiency with which innovation inputs are converted into innovation outputs is the key to increase firm performance.

Family management is often related to a long-term perspective due to the overlap between the family and the business. In this vein, authors agree that innovation is a necessary condition for family firms' continuity (Kellermanns et al. 2012; Martínez-Alonso et al. 2018). Accordingly, by refining the management of innovation resources and capabilities, family-managed firms may be able to increase the probability of sustainability and survival in the long term (Revilla et al. 2016; Yu et al. 2011). Moreover, although family involvement in TMT is seen as a specific governance structure (Diéguez-Soto et al. 2018) that enables the possession of unique characteristics such as long-standing relationships (Patel and Fiet 2011), social capital (Arregle et al. 2007), or tacit knowledge (Llach and Nordqvist 2010), it does not appear to be a sufficient condition for the achievement of competitive advantages and the enhancement of firm performance (Dyer 2006; Wagner et al. 2015). At this respect, a higher efficiency in the conversion of innovation inputs into innovation outputs (Duran et al. 2016) may help family-managed firms to reinforce their unique systemic conditions, contributing to the development of idiosyncratic resources and dynamic capabilities (Sirmon et al. 2007; Teece et al. 1997). Specifically, these characteristics may be fully developed by being the best at orchestrating resources (Chirico et al. 2011), because the simple possession of innovation resources is not enough to achieve superior firm performance (Sirmon and Hitt 2003).

Hence, more efficient management of innovation resources would enable family managers to attract external stakeholders, including other family-managed firms (Miller and Le Breton-Miller 2005). Greater TI efficiency derived from the consolidation of these relationships (Diéguez-Soto et al. 2018) allows family managers to



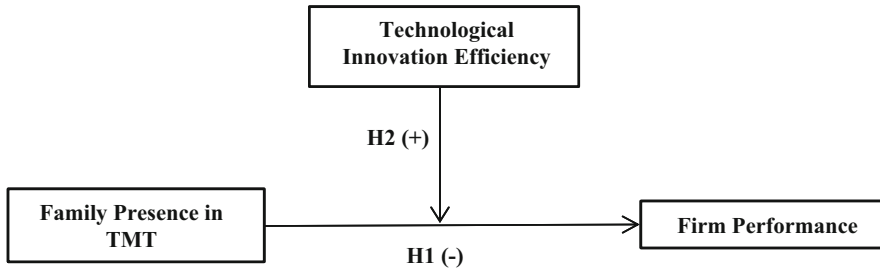
further develop their social capital (Schulze and Gedajlovic 2010). These external groups are usually aware of the innovative potential of family-managed firms, and therefore, they are eager to establish long-standing and prosperous relationships with them (Miller and Le Breton-Miller 2005). Accordingly, the establishment of these relationships could lead to the development of open innovation projects (Feranita et al. 2017) and more precisely R&D collaborations (Grimpe and Kaiser 2010), which might increase TI efficiency and, thus, can help family-managed firms to improve their firm performance (Carney 2005).

Moreover, these external partners are aware of the family firms' desire to preserve their SEW in the long term (Martínez-Romero et al. 2020), as well as their concern to protect and maintain the family firm reputation and identity (Deephouse and Jaskiewicz 2013), given the closeness these firms show to the environment in which they operate (Berrone et al. 2010). As a consequence, whether family managers do not perceive a threat over their SEW and their firm control and, more importantly, whether their noneconomic goals are not surpassed by economic ones, they would be willing to accept the establishment of such collaborative innovation ties (Feranita et al. 2017). These innovation networks will increase the R&D critical mass augmenting the possibilities of obtaining innovation outcomes and, thus, TI efficiency (Galende Del Canto and Suárez González 1999; Kanacs and Siliverstovs 2016). Therefore, increased TI efficiency will enable family managers to take full advantage of this privileged knowledge derived from the relationships with selected stakeholders and, then, enhance firm performance (Matzler et al. 2015).

It is known that better communication and tacit knowledge may increase TI efficiency in family-managed firms. Some family-managed firms could create a virtuous circle in such a way that TI efficiency may enhance the business-oriented, friendly, sincere, and close relationships inside the firm (Gómez-Mejía et al. 2007). In this vein, TI efficiency may permit a more fluid communication among family-managed firms' members (Diéguez-Soto et al. 2018), an improved decision-making quality (Vandekerckhof et al. 2018), and also the transmission of valuable ideas across different departments (Bammens et al. 2015). This strong feeling of mutual trust between family managers, due to the increased TI efficiency, positively contributes to wider dissemination of tacit knowledge throughout the firm (Nieto et al. 2015). The possession of this unique and non-transferable knowledge (Duran et al. 2016) will enable family managers to reinforce the commitment and identification with their firms (Chrisman et al. 2012; Pazzaglia et al. 2013) and, consequently, improve their performance outcomes. That is, TI efficiency will reinforce the abovementioned family-managed firms' distinctive characteristics, unlocking their performance potential.

Based on the previous discussion, we state that TI efficiency may weaken the negative influence of family TMT members on firm performance since it contributes to align economic and noneconomic goals improving firms' outcomes. Therefore, our second hypothesis is:

**Hypothesis 2** Technological innovation efficiency weakens the negative influence of family presence in TMT on firm performance.



**Fig. 1** Theoretical model and hypotheses

The theoretical model and the proposed hypotheses are presented in Fig. 1.

### 3 Research Method

#### 3.1 *Sample and Data Sources*

In order to check our hypotheses, we employed the Survey on Business Strategies (ESEE). Specifically, we analyzed the 2010–2015 period. The ESEE is administered by the State Partnership of Manufacturing Equity (SEPI) foundation on behalf of the Spanish Ministry of Industry and consists of manufacturing firms. The survey is designed following both exhaustive and random sampling criteria, guaranteeing the representativeness of the population and the validity of the contents. Notably, the data include the whole population of Spanish manufacturing businesses with 200 or more employees and a stratified random sample of 5% of the population of firms with at least 10 but fewer than 200 employees. The survey, which has been conducted year by year since 1990, encompasses unbalanced data covering 1800 firms on average per year. After removing businesses with incomplete data for the analyzed variables, we adopted a matched-pair research design (see among others Allouche et al. 2008) through which each firm that achieves TI efficiency was matched with another one without TI efficiency. This approach is based on two potential factors, firm size (ln of total assets) and industry (three-digit SIC code). The matching was conducted for each year (see Table 1 for the distribution of pairs by year). The final sample comprises 1154 observations of private manufacturing firms (577 with TI efficiency and 577 without TI efficiency). Table 1 provides a more detailed view of the sample.

**Table 1** Sample characteristics

Number of firms per year		
<i>Year</i>	Firms in the population	Matched sample
2010	5040	200
2011	5040	190
2012	5304	198
2013	5304	202
2014	5566	192
2015	5566	172
<i>Sample composition by size</i>		
	<i>N</i>	%
Large-sized firms	601	52.10
Medium-sized firms	374	32.40
Small-sized firms	179	15.50
Total	1154	100.00
<i>Sample composition by industry</i>		
Industry	<i>N</i>	%
Meat industry	40	3.47
Foodstuffs and snuff	174	15.09
Drinks	16	1.40
Textiles and clothing	64	5.55
Leather and footwear	12	1.04
Timber industry	12	1.04
Paper industry	4	0.35
Chemical and pharmaceutical products	228	19.76
Rubber and plastic	42	3.64
Nonmetallic mineral products	48	4.16
Ferrous and nonferrous metals	18	1.56
Metal products	34	2.90
Agricultural and industrial machinery	172	14.90
Computer, electronic, and optical products	48	4.16
Electrical machinery and material	88	7.63
Motor vehicles	84	7.28
Other transport equipment	34	2.95
Furniture industry	36	3.12
Total	1154	100.00

### 3.2 Variables

**Dependent Variable** In this chapter, *firm performance* is measured by the return on assets ratio (earnings before interest and tax to total assets), which is commonly used in the family business field (e.g., Anderson and Reeb 2003) and particularly when studying innovation in family businesses (e.g., Diéguez-Soto et al. 2019).

**Independent Variable** *Family presence in management* is the independent variable. In line with the study of Kotlar et al. (2014), we contemplate both family ownership and family involvement in TMT as factors that affect decision-making in family businesses. Accordingly, we define family presence in management as a continuous variable counting the number of family members in the firm's TMT (Kotlar et al. 2013; Manzanegue et al. 2020).

**Moderating Variable** We employ *TI efficiency* as a moderating variable. Following Cruz-Cázares et al. (2013), who consider that an optimal measure of TI efficiency should include both innovation input and innovation output, we use R&D expenses as innovation input (Qiao and Fung 2016) and the number of product innovations as innovation output (Cruz-Cázares et al. 2013). Therefore, TI efficiency is measured by the ratio of the number of product innovations over R&D expenses.

**Control Variables** In order to rule out possible alternative explanations to that formally hypothesized, we include several control variables that might affect firm performance. Because firm capabilities are formed through experience acquired over time (Cruz-Cázares et al. 2013), we control by *firm age*, measured as the number of years between the firm's foundation and the observation year (Martínez-Romero and Rojo-Ramírez 2017). Since large firms have advantages in comparison with small firms in terms of financial and economic resources or internal knowledge (Cohen and Klepper 1996), which are expected to increase both TI efficiency and firm performance, we controlled for *firm size* measured as the log of total assets (Kotlar et al. 2013). Moreover, because firms with more significant financial resources can achieve greater firm performance, *leverage* is measured as debt to total assets ratio (Block 2012). We also measure the *geographical localization* by adding a group of dummy variables to control for the territorial specificities or context conditions (Camagni and Capello 2013). These control variables also allow us to capture the effect of geographical opportunities to improve firm performance and to develop innovation (Diéguez-Soto et al. 2019). Specifically, we include dummy variables representative of seven Spanish territorial subdivisions (NUTS1, Nomenclature des Unités Territoriales Statistiques).<sup>1</sup> Finally, 18 dummy variables referring to specific sub-industries were included in all models.

### 3.3 Methods

Given that our primary goal is to analyze both the influence of family TMT members on firm performance and the moderating effect of TI efficiency in the

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<sup>1</sup>Regions in the European Union-NUTS 2013/EU-28. Eurostat: <http://ec.europa.eu/eurostat/web/nuts/overview> [Accessed 10th of October of 2018]. The subdivisions are (1) Northwest, (2) North-eastern, (3) Madrid, (4) Center, (5) East, (6) South, and (7) Canarias.

abovementioned relationship, we estimate different models based on the following equation:

$$\begin{aligned} \text{Firm Performance} = & \beta_0 + \beta_1 \text{Family management} \\ & + \beta_2 \text{Technological innovation efficiency} \\ & + \beta_3 \text{Family management} \\ & * \text{Technological innovation efficiency} + \beta_4 \text{Firm age} \\ & + \beta_5 \text{Firm size} + \beta_6 \text{Leverage} + \beta_7 \text{Territorial subdivisions} \\ & + \beta_8 \text{Sub - industries} + \varepsilon \end{aligned}$$

We use a panel data methodology, which allows us to control for individual heterogeneity or unobservable individual effects. Commonly, it is required to distinguish fixed effect from random effect in panel data, typically using Hausman test. However, in our case fixed effect estimation is not appropriate given the time-invariant nature of the industry affiliation and territorial subdivisions dummies (Diéguez-Soto and López-Delgado 2019; González et al. 2013). Consequently, to test our hypotheses, we use robust and two-stage least squares regression with random effects controlling for heteroscedasticity.

## 4 Results

Means, other descriptive statistics for continuous variables, and frequencies for categorical variables are reported in Panel A, Table 2.

The correlation matrix is presented in Panel B, Table 2. Multicollinearity should not be a concern in our study as we found only moderate levels of correlation between our variables. Besides, we analyzed the variance inflation factors (VIF) and observed that all values were lower than 1.13, which is below the suggested warning level proposed in prior research (Hair et al. 1999). Thus, there is enough evidence to rule out multicollinearity in the data.

Table 3 shows the regressions results. Model 1 is the baseline model and includes only control variables. Model 2 is a variant of model 1 in which we add the variable family presence in TMT. The coefficient of family presence in management is negative and significant in explaining the firm performance ( $\beta = -0.004$ ;  $p < 0.1$ ), supporting our first hypothesis.

The variable TI efficiency is then introduced in Model 3. The results show that the coefficient of TI efficiency is nonsignificant. However, the direct effect of the moderator is not substantial for testing the moderating hypothesis (Baron and Kenny 1986); on the contrary, whether the moderator is uncorrelated with the dependent variable, the interpretation of the interaction term is more straightforward (Michiels et al. 2014). Further, what we want to examine is when and to what extent TI efficiency through long-standing relationships, tacit knowledge, and social capital leads family-managed firms to the improvement of their performance outcomes. TI

**Table 2** Descriptive statistics and correlation matrix

Panel A. Descriptive statistics					
<i>Continuous variables</i>					
	Mean	Median	25%	75%	Std. Dev.
ROA	0.094	0.078	0.034	0.137	0.112
Firm age	3.485	3.583	3.135	3.891	0.633
Firm size	17.689	17.615	16.612	18.660	1.638
Leverage	0.497	0.492	0.339	0.664	0.214
Family management	0.605	0.000	0.000	1.000	1.026
Technological innovation efficiency	3.22e−05	1.97e−08	0.000	4.80e−06	3.95e−04
<i>Categorical variables</i>					
Geographical localization	<i>N</i>	%			
Northwest	136	11.80			
Northeastern	188	16.29			
Madrid	71	6.18			
Center	175	15.17			
East	480	41.57			
South	91	7.87			
Canarias	13	1.12			
Panel B. Correlation matrix					
	1	2	3	4	5
1. ROA					
2. Firm age	−0.042				
3. Firm size	−0.035	0.102***			
4. Leverage	−0.108***	−0.076***	0.209***		
5. Family management	−0.043*	−0.076***	−0.241***	−0.055**	
6. Technological innovation efficiency	−0.060*	0.003	−0.079**	−0.018	−0.012

*N* (observations) = 1154; \*\*\*Significant at 1%. \*\*Significant at 5%. \*Significant at 10%

efficiency is thus expected to indirectly affect the relationship between family presence in TMT and firm performance.

Hence, to capture this potential moderating impact of TI efficiency on the family presence in TMT-firm performance relationship, Model 4 includes the interaction effect of Family management\*TI efficiency, which is positive and statistically significant ( $\beta = 84.989$ ;  $p < 0.1$ ). Therefore, our results provide support for our second hypothesis.

Figure 2 shows a plot of this interaction effect with a positive slope for family presence in TMT and firm performance when TI efficiency is high and a negative slope for family presence in TMT and firm performance when TI efficiency is low. These results further confirm H2.

**Table 3** Random effects regressions

Dependent variable	Firm performance (ROA)			
	Model 1	Model 2	Model 3	Model 4
<i>Main effect</i>				
Family management ( $\beta_1$ )		-0.004* (0.003)	-0.004 (0.004)	-0.005 (0.004)
<i>Moderator</i>				
Technological innovation efficiency ( $\beta_2$ )			-8.888 (2.227)	-11.543 (1.494)
<i>Interaction effect</i>				
Family management $\times$ technological innovation efficiency ( $\beta_3$ )				84.989* (47.310)
<i>Controls</i>				
Firm age ( $\beta_4$ )	-0.007 (0.010)	-0.007 (0.010)	-0.006 (0.010)	-0.013 (0.011)
Firm size ( $\beta_5$ )	-0.007* (0.004)	-0.008* (0.004)	-0.007 (0.004)	-0.004 (0.004)
Leverage ( $\beta_6$ )	-0.096*** (0.029)	-0.096*** (0.029)	-0.070*** (0.025)	-0.074*** (0.025)
Territorial subdivisions	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
Constant	0.323*** (0.104)	0.336*** (0.106)	0.321*** (0.105)	0.299*** (0.099)
Number of observations	1154	1154	1154	1154
<i>Hausman test</i>				
Wald's $X^2$	69.99*** (29)	71.64*** (30)	67.78*** (29)	196.88*** (34)
<i>R<sup>2</sup></i>				
Within	0.0269	0.0263	0.0066	0.0306
Between	0.1412	0.1459	0.1472	0.1528
Overall	0.0762	0.0787	0.1000	0.1071

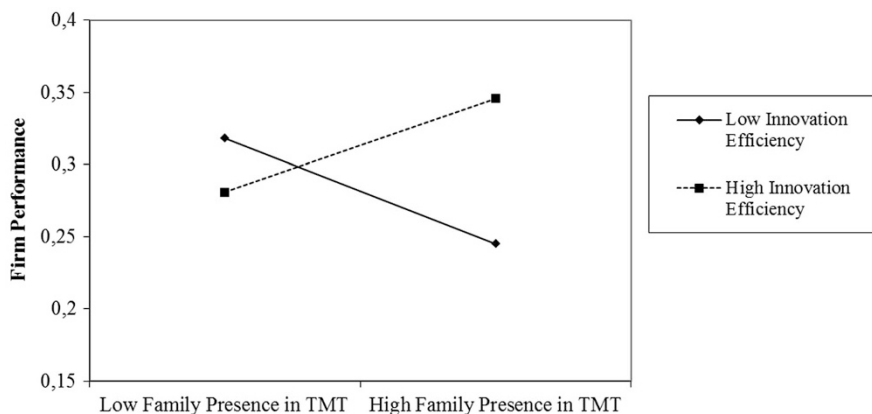
Notes: (1) Standard errors are in parentheses

\*\*\*Significant at 1%. \*Significant at 10%

#### 4.1 Robustness Test

To strengthen the obtained findings, we developed an additional robustness control on the interaction effect of TI efficiency, using an alternative measure of this moderating variable. Thus, in this case, TI efficiency is calculated by the ratio of the number of product innovations over R&D intensity. R&D intensity has been commonly utilized in prior literature (e.g., Manzanque et al. 2018) as an innovation input in the measurement of TI efficiency.

Table 4 shows that the robustness test results are very similar to those obtained in previous analyses (Table 3), thus reinforcing our empirical findings. Model 6 reveals



**Fig. 2** Interaction effect of TI efficiency on the relationship between family presence in TMT and firm performance

**Table 4** Robustness test

Dependent variable	Firm performance (ROA)	
	Model 5	Model 6
<i>Main effect</i>		
Family management ( $\beta_1$ )	-0.004 (0.004)	-0.006 (0.004)
<i>Moderator</i>		
Technological innovation efficiency ( $\beta_2$ )	-4.18e-07 (2.59e-07)	-5.42e-07 (1.94e-07)
<i>Interaction effect</i>		
Family management $\times$ technological innovation efficiency ( $\beta_3$ )		7.68e-06* (4.32e-06)
<i>Controls</i>		
Firm age ( $\beta_4$ )	-0.006 (0.010)	-0.011 (0.011)
Firm size ( $\beta_5$ )	-0.006 (0.004)	-0.007* (0.004)
Leverage ( $\beta_6$ )	-0.070*** (0.025)	-0.070*** (0.024)
Territorial subdivisions	Yes	Yes
Industry dummies	Yes	Yes
Constant	0.319*** (0.105)	0.340*** (0.107)
Number of observations	1154	1154
<i>Hausman test</i>		
Wald's $X^2$	58.36*** (29)	88.35*** (34)
$R^2$		
Within	0.0064	0.0323
Between	0.1449	0.1519
Overall	0.0981	0.1106

Note. (1) Standard errors are in parentheses  
 \*\*\*Significant at 1%. \*Significant at 10%



that the interaction effect of Family management\*TI efficiency exerts a positive and significant impact ( $\beta = 7.68e-06$ ;  $p < 0.1$ ) on firm performance.

In short, this check enables us to guarantee the consistency of our results.

## 5 Discussion

Investigating how family presence in TMT influences firm performance has become an important topic in management research (e.g., Block et al. 2011; Manzanque et al. 2020). Prior literature has shown that family-managed firms often prioritize noneconomic goals over economic ones (Gómez-Mejía et al. 2007, 2010), creating a unique context that affects decision-making and strategy implementation and, ultimately, the achieved performance (Martínez-Romero et al. 2020; Rojo-Ramírez and Martínez-Romero 2018). However, as previously stated, the existing results regarding the effect of family presence in TMT on firm performance are far from being conclusive (Vandekerckhof et al. 2018). At this respect, it is important to highlight that we found a lack of prior studies investigating firms' factors that may have an indirect impact on the family involvement-performance relationship. This is why we introduce a moderating factor, i.e., TI efficiency, which might well be helpful to explain the controversial results.

In line with recent studies (Martínez-Romero et al. 2020; Sciascia and Mazzola 2008), our empirical findings show that family involvement in management, and specifically family presence in the TMT, exerts a negative influence on firm performance. These results can be explained in the light of both the upper echelon and the SEW theories, since family managers would avoid taking strategic decisions that imply a loss of control over their firms (Gómez-Mejía et al. 2007, 2010), knowing that these decisions might involve improved performance outcomes. Furthermore, our findings reveal a positive moderating effect of TI efficiency on the family management-performance relationship. That is, firms with higher family presence in TMT and with enhanced TI efficiency, by promoting long-standing and prosperous relationships with selected stakeholders (Patel and Fiet 2011), social capital (Arregle et al. 2007), and tacit knowledge (Llach and Nordqvist 2010), weaken the negative relationship between family presence in TMT and firm performance.

This chapter contributes to previous literature in several manners. First, we analyzed the family presence in TMT-firm performance relationship in the context of private firms, which up to now has not received enough attention (Martínez-Romero et al. 2020; Sharma and Carney 2012), despite the mixing findings (Sciascia et al. 2014). In line with recent studies (Diéguez-Soto et al. 2019), our findings reveal that family managers, as the dominant coalition in family firms (Hambrick and Mason 1984; Vandekerckhof et al. 2015), negatively influence performance outcomes. Furthermore, we go a step further than previous research that used a binary measure of family management (e.g., Diéguez-Soto et al. 2018; Rojo-Ramírez and Martínez-Romero 2018), by using a continuous variable of family presence in TMT, disclosing heterogeneity across family firms concerning firm performance.

Second, with the purpose of shedding some light on the family management-performance relationship, this chapter introduces the moderating effect of TI efficiency. Thus, our study provides relevant insights regarding the interactive effect of TI efficiency and family presence in TMT with regard to performance outcomes. In such a way, our findings highlight that when TI efficiency is high, firms with a significant family presence in TMT can obtain higher performance outcomes, whereas when TI efficiency is low, firms with a significant family presence in TMT decrease their performance results. That is, Fig. 2 evinces that the moderating effect of TI efficiency on the family management-performance relationship is contingent upon the number of family managers on the TMT. Thus, our results seem to suggest that when there is a higher presence of family members in the TMT and a greater TI efficiency, family managers do not perceive any threat to their emotional endowment, because they dominate the strategic decision-making. In these situations, family managers enter in a virtuous circle and will be willing to establish collaborative innovation ties that increase TI efficiency (Feranita et al. 2017) and thus, firm performance, since these innovative collaborations are not contemplated as a loss of their firm control.

Our findings also have important practical implications, particularly for those family-managed firms that are disposed to enhance their firm's outcomes. In this sense, family managers should be aware of the importance of attaining higher TI efficiency in order to reach a proper balance between their economic and noneconomic goals. In this vein, family-managed firms may hire key external managers to learn from them the necessary skills and knowledge to improve efficiency in the resource management and implement an innovative culture that persists in the long term (Diéguez-Soto et al. 2016). Furthermore, external managers can avoid certain common practices in family firms such as overcompensation (Anderson and Reeb 2004) or prevent an unqualified family member from becoming CEO (Shleifer and Vishny 1986), which could be detrimental to the implementation and development of innovative projects and, thus, to TI efficiency and firm performance.

Notwithstanding the relevance of the obtained results, this chapter presents certain limitations that, in turn, open new lines for future research. Although we have focused on the family members' presence in the TMT, we have not contemplated the heterogeneity between these members. At this respect, future studies should analyze whether the interaction effect of TI efficiency on firm performance is the same when in a family firm, TMT members of various generations with different goals and values coexist (Chrisman et al. 2012). What is more, we measured TI efficiency using number of products as innovation output instead of using process innovation, which has been considered essential to decrease costs and to improve production efficiency by reducing the required level of input (Chang et al. 2015; Ramos et al. 2011). Thus, further research should consider the use of both product and process innovations as outputs to calculate TI efficiency in order to see its possible consequences on firm performance.

## 6 Conclusion

Overall, this chapter examines fundamental relationships in the family firm field, relating family presence in TMT to firm performance and highlighting the key role of TI efficiency. Thus, this manuscript reveals that TI efficiency weakens the negative relationship between the family presence in TMT and firm performance. Notwithstanding our study extends the theoretical and empirical contributions of prior literature (Diéguez-Soto et al. 2019; Sciascia and Mazzola 2008; Sciascia et al. 2014), more research is required to better understand the management implications in family firms performance and, more importantly, to identify what new factors may indirectly contribute to enhancing the family presence in TMT-firm performance relationship.

## References

- Allouche, J., Amann, B., Jaussaud, J., & Kurashina, T. (2008). The impact of family control on the performance and financial characteristics of family versus nonfamily businesses in Japan: A matched-pair investigation. *Family Business Review*, 21(4), 315–329.
- Anderson, R. C., & Reeb, D. M. (2003). Founding-family ownership and firm performance: Evidence from the S&P 500. *The Journal of Finance*, 58(3), 1301–1329.
- Anderson, R. C., & Reeb, D. M. (2004). Board composition: Balancing family influence in S&P 500 firms. *Administrative Science Quarterly*, 49(2), 209–237.
- Arosa, B., Iturralde, T., & Maseda, A. (2010). Ownership structure and firm performance in non-listed firms: Evidence from Spain. *Journal of Family Business Strategy*, 1(2), 88–96.
- Arregle, J.-L., Hitt, M. A., Sirmon, D. G., & Very, P. (2007). The development of organizational social capital: Attributes of family firms. *The Journal of Management Studies*, 44(1), 73–95.
- Arrondo-García, R., Fernández-Méndez, C., & Menéndez-Requejo, S. (2016). The growth and performance of family businesses during the global financial crisis: The role of the generation in control. *Journal of Family Business Strategy*, 7(4), 227–237.
- Astrachan, J. H., & Jaskiewicz, P. (2008). Emotional returns and emotional costs in privately held family businesses: Advancing traditional business valuation. *Family Business Review*, 21(2), 139–149.
- Bammens, Y., Notelaers, G., & Van Gils, A. (2015). Implications of family business employment for employees' innovative work involvement. *Family Business Review*, 28(2), 123–144.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173–1182.
- Basco, R. (2013). The family's effect on family firm performance: A model testing the demographic and essence approaches. *Journal of Family Business Strategy*, 4(1), 42–66.
- Berrone, P., Cruz, C., Gómez-Mejía, L. R., & Larraza-Kintana, M. (2010). Socioemotional wealth and corporate responses to institutional pressures: Do family-controlled firms pollute less? *Administrative Science Quarterly*, 55(1), 82–113.
- Berrone, P., Cruz, C., & Gómez-Mejía, L. R. (2012). Socioemotional wealth in family firms: Theoretical dimensions, assessment approaches, and agenda for future research. *Family Business Review*, 25(3), 258–279.
- Block, J. H. (2012). R&D investments in family and founder firms: An agency perspective. *Journal of Business Venturing*, 27(2), 248–265.

- Block, J. H., Jaskiewicz, P., & Miller, D. (2011). Ownership versus management effects on performance in family and founder companies: A Bayesian reconciliation. *Journal of Family Business Strategy*, 2(4), 232–245.
- Camagni, R., & Capello, R. (2013). Regional innovation patterns and the EU regional policy reform: Toward smart innovation policies. *Growth and Change*, 44(2), 355–389.
- Carney, M. (2005). Corporate governance and competitive advantage in family-controlled firms. *Entrepreneurship & Regional Development*, 29(3), 249–265.
- Certo, S. T., Lester, R. H., Dalton, C. M., & Dalton, D. R. (2006). Top management teams, strategy and financial performance: A meta-analytic examination. *Journal of Management Studies*, 43(4), 813–839.
- Chang, J., Bai, X., & Li, J. J. (2015). The influence of leadership on product and process innovations in China: The contingent role of knowledge acquisition capability. *Industrial Marketing Management*, 50, 18–29.
- Chirico, F., Sirmon, D. G., Sciascia, S., & Mazzola, P. (2011). Resource orchestration in family firms: Investigating how entrepreneurial orientation, generational involvement, and participative strategy affect performance. *Strategic Entrepreneurship Journal*, 5(4), 307–326.
- Chrisman, J. J., Chua, J. H., Pearson, A. W., & Barnett, T. (2012). Family involvement, family influence, and family-centered non-economic goals in small firms. *Entrepreneurship Theory and Practice*, 36(2), 267–293.
- Chua, J. H., Chrisman, J. J., & Sharma, P. (1999). Defining the family business by behavior. *Entrepreneurship Theory and Practice*, 23(4), 19–39.
- Cohen, W. M., & Klepper, S. (1996). A reprise of size and R & D. *The Economic Journal*, 106(437), 925–951.
- Cruz-Cázares, C., Bayona-Sáez, C., & García-Marco, T. (2013). You can't manage right what you can't measure well: Technological innovation efficiency. *Research Policy*, 42(6–7), 1239–1250.
- Cyert, R. M., & March, J. G. (1963). *A behavioral theory of the firm*. New York: Wiley-Blackwell.
- De Massis, A., Frattini, F., & Lichtenthaler, U. (2013a). Research on technological innovation in family firms: Present debates and future directions. *Family Business Review*, 26(1), 10–31.
- De Massis, A., Kotlar, J., Campopiano, G., & Cassia, L. (2013b). Dispersion of family ownership and the performance of small-to-medium size private family firms. *Journal of Family Business Strategy*, 4(3), 166–175.
- De Massis, A., Kotlar, J., Chua, J. H., & Chrisman, J. J. (2014). Ability and willingness as sufficiency conditions for family-oriented particularistic behavior: Implications for theory and empirical studies. *Journal of Small Business Management*, 52(2), 344–364.
- De Massis, A., Kotlar, J., Campopiano, G., & Cassia, L. (2015). The impact of family involvement on SMEs' performance: Theory and evidence. *Journal of Small Business Management*, 53(4), 924–948.
- Deephouse, D. L., & Jaskiewicz, P. (2013). Do family firms have better reputations than non-family firms? An integration of socioemotional wealth and social identity theories. *Journal of Management Studies*, 50(3), 337–360.
- Diéguez-Soto, J., & López-Delgado, P. (2019). Does family and lone founder involvement lead to similar indebtedness? *Journal of Small Business Management*, 57(4), 1531–1558.
- Diéguez-Soto, J., López-Delgado, P., & Rojo-Ramírez, A. A. (2015). Identifying and classifying family businesses. *Review of Managerial Science*, 9(3), 603–634.
- Diéguez-Soto, J., Duréndez, A., García-Pérez-de-Lema, D., & Ruiz-Palomo, D. (2016). Technological, management, and persistent innovation in small and medium family firms: The influence of professionalism. *Canadian Journal of Administrative Sciences*, 33(4), 332–346.
- Diéguez-Soto, J., Garrido-Moreno, A., & Manzaneque, M. (2018). Unraveling the link between process innovation inputs and outputs: The moderating role of family management. *Journal of Family Business Strategy*, 9(2), 114–127.
- Diéguez-Soto, J., Manzaneque, M., González-García, V., & Galache-Laza, T. (2019). A study of the moderating influence of R&D intensity on the family management-firm performance

- relationship: Evidence from Spanish private manufacturing firms. *BRQ Business Research Quarterly*, 22(2), 105–118.
- Duran, P., Kammerlander, N., van Essen, M., & Zellweger, T. M. (2016). Doing more with less: Innovation input and output in family firms. *Academy of Management Journal*, 59(4), 1224–1264.
- Dyer, W. G., Jr. (2006). Examining the “family effect” on firm performance. *Family Business Review*, 19(4), 253–273.
- Family Firm Institute. (2018). *Global data points*. Retrieved from <https://my.ffi.org/page/globaldatapoints>
- Feranita, F., Kotlar, J., & De Massis, A. (2017). Collaborative innovation in family firms: Past research, current debates, and agenda for future research. *Journal of Family Business Strategy*, 8(3), 137–156.
- Galende Del Canto, J., & Suárez González, I. (1999). A resource-based analysis of the factors determining a firm’s R&D activities. *Research Policy*, 28(8), 891–905.
- Gallucci, C., Santulli, R., & Calabrò, A. (2015). Does family involvement foster or hinder firm performance? The missing role of family-based branding strategies. *Journal of Family Business Strategy*, 6(3), 155–165.
- Gao, W., & Chou, J. (2015). Innovation efficiency, global diversification, and firm value. *Journal of Corporate Finance*, 30, 278–298.
- Gómez-Mejía, L. R., Haynes, K. T., Núñez-Nickel, M., Jacobson, K. J. L., & Moyano-Fuentes, J. (2007). Socioemotional wealth and business risks in family-controlled firms: Evidence from Spanish olive oil Mills. *Administrative Science Quarterly*, 52(1), 106–137.
- Gómez-Mejía, L. R., Makri, M., & Kintana, M. L. (2010). Diversification decisions in family-controlled firms. *Journal of Management Studies*, 47(2), 223–252.
- González, M., Guzmán, A., Pombo, C., & Trujillo, M. A. (2013). Family firms and debt: Risk aversion versus risk of losing control. *Journal of Business Research*, 66(11), 2308–2320.
- Grimpe, C., & Kaiser, U. (2010). Balancing internal and external knowledge acquisition: The gains and pains from R & D outsourcing. *Journal of Management Studies*, 47(8), 1483–1509.
- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1999). *Análisis multivariante*. Madrid: Prentice Hall.
- Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9(2), 193–206.
- IEF & Red de Cátedras de Empresa Familiar. (2015). *La Empresa Familiar en España (2015)*. Barcelona: Instituto de la Empresa Familiar.
- IEF & Red de Cátedras de Empresa Familiar. (2018). *Factores de Competitividad y Análisis Financiero en la Empresa Familiar*. Barcelona: Instituto de la Empresa Familiar.
- Kammerlander, N., Siegel, P., Voordeckers, W., & Zellweger, T. M. (2015). Value creation in family firms: A model of fit. *Journal of Family Business Strategy*, 6(2), 63–72.
- Kancs, A., & Siliverstovs, B. (2016). R&D and non-linear productivity growth. *Research Policy*, 45(3), 634–646.
- Kellermanns, F. W., Eddleston, K. A., Sarathy, R., & Murphy, F. (2012). Innovativeness in family firms: A family influence perspective. *Small Business Economics*, 38(1), 85–101.
- Kor, Y. (2006). Direct and interaction effects of top management team and board compositions on R&D investment strategy. *Strategic Management Journal*, 27(11), 1081–1099.
- Kotlar, J., De Massis, A., Frattini, F., Bianchi, M., & Fang, H. (2013). Technology acquisition in family and nonfamily firms: A longitudinal analysis of Spanish manufacturing firms. *Journal of Product Innovation Management*, 30(6), 1073–1088.
- Kotlar, J., Fang, H., De Massis, A., & Frattini, F. (2014). Profitability goals, control goals, and the R&D investment decisions of family and nonfamily firms. *Journal of Product Innovation Management*, 31(6), 1128–1145.
- La Porta, R., Lopez-De-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *The Journal of Finance*, 54(2), 471–517.

- Le Breton-Miller, I., Miller, D., & Lester, R. H. (2011). Stewardship or agency? A social embeddedness reconciliation of conduct and performance in public family businesses. *Organization Science*, 22, 704–721.
- Ling, Y., & Kellermanns, F. W. (2010). The effects of family firm-specific sources of TMT diversity: The moderating role of information exchange frequency. *Journal of Management Studies*, 47(2), 322–344.
- Llach, J., & Nordqvist, M. (2010). Innovation in family and non-family businesses: A resource perspective. *International Journal of Entrepreneurial Venturing*, 2(3), 381–399.
- López-Delgado, P., & Diéguez-Soto, J. (2015). Lone founders, types of private family businesses and firm performance. *Journal of Family Business Strategy*, 6(2), 73–85.
- Manzaneque, M., Diéguez-Soto, J., & Garrido-Moreno, A. (2018). Technological innovation inputs, outputs, and family management: Evidence from Spanish manufacturing firms. *Innovation: Management, Policy & Practice*, 20(4), 299–325.
- Manzaneque, M., Rojo-Ramírez, A. A., Diéguez-Soto, J., & Martínez-Romero, M. J. (2020). How negative aspiration performance gaps affect innovation efficiency. *Small Business Economics*, 54(1), 209–233.
- Martínez-Alonso, R., Martínez-Romero, M. J., & Rojo-Ramírez, A. (2018). Technological innovation and socioemotional wealth in family firm research: Literature review and proposal of a conceptual framework. *Management Research: Journal of the Iberoamerican Academy of Management*, 16(3), 270–301.
- Martínez-Romero, M. J. (2018). *Financial performance and value creation in privately held family businesses: The influence of socioemotional wealth*. Doctoral thesis, Almería.
- Martínez-Romero, M. J., & Rojo-Ramírez, A. A. (2016). SEW: Looking for a definition and controversial issues. *European Journal of Family Business*, 6(1), 1–9.
- Martínez-Romero, M. J., & Rojo-Ramírez, A. A. (2017). Socioemotional wealth's implications in the calculus of the minimum rate of return required by family businesses' owners. *Review of Managerial Science*, 11(1), 95–118.
- Martínez-Romero, M. J., Martínez-Alonso, R., & Casado-Belmonte, M. P. (2020). The influence of socioemotional wealth on firm financial performance: Evidence from small and medium privately held family businesses. *International Journal of Entrepreneurship and Small Business*, 40(1), 7–31.
- Matzler, K., Veider, V., Hautz, J., & Stadler, C. (2015). The impact of family ownership, management, and governance on innovation. *Journal of Product Innovation Management*, 32(3), 319–333.
- Michiels, A., Voordeckers, W., Lybaert, N., & Steijvers, T. (2014). Dividends and family governance practices in private family firms. *Small Business Economics*, 44(2), 299–314.
- Miller, D., & Le Breton-Miller, I. (2005). *Managing for the long run: Lessons in competitive advantage from great family businesses*. Boston, MA: Harvard Business School Press.
- Miller, D., Le Breton-Miller, I., Lester, R. H., & Cannella, A. (2007). Are family firms really superior performers? *Journal of Corporate Finance*, 13(5), 829–858.
- Nieto, M. J., Santamaria, L., & Fernandez, Z. (2015). Understanding the innovation behavior of family firms. *Journal of Small Business Management*, 53(2), 382–399.
- Patel, P. C., & Fiet, J. O. (2011). Knowledge combination and the potential advantages of family firms in searching for opportunities. *Entrepreneurship Theory and Practice*, 35(6), 1179–1197.
- Pazzaglia, F., Mengoli, S., & Sapienza, E. (2013). Earnings quality in acquired and nonacquired family firms: A socioemotional wealth perspective. *Family Business Review*, 26(4), 374–386.
- Poutziouris, P. Z. (2001). The views of family companies on venture capital: Empirical evidence from the UK small to medium-size enterprising economy. *Family Business Review*, 14(3), 277–291.
- Qiao, P., & Fung, A. (2016). How does CEO power affect innovation efficiency? *The Chinese Economy*, 49(4), 231–238.
- Ramos, E., Acedo, F. J., & Gonzalez, M. R. (2011). Internationalisation speed and technological patterns: A panel data study on Spanish SMEs. *Technovation*, 31(10–11), 560–572.

- Revilla, A. J., Perez-Luno, A., & Nieto, M. J. (2016). Does family involvement in management reduce the risk of business failure? The moderating role of entrepreneurial orientation. *Family Business Review*, 29(4), 365–379.
- Royo-Ramírez, A. A., & Martínez-Romero, M. J. (2018). Required and obtained equity returns in privately held businesses: The impact of family nature—Evidence before and after the global economic crisis. *Review of Managerial Science*, 12(3), 771–801.
- Schulze, W. S., & Gedajlovic, E. R. (2010). Whither family business? *Journal of Management Studies*, 47(2), 191–204.
- Schulze, W. S., Lubatkin, M. H., Dino, R. N., & Buchholtz, A. K. (2001). Agency relationships in family firms: Theory and evidence. *Organization Science*, 12(2), 99–116.
- Sciascia, S., & Mazzola, P. (2008). Family involvement in ownership and management: Exploring nonlinear effects on performance. *Family Business Review*, 21(4), 331–345.
- Sciascia, S., Mazzola, P., & Kellermanns, F. W. (2014). Family management and profitability in private family-owned firms: Introducing generational stage and the socioemotional wealth perspective. *Journal of Family Business Strategy*, 5(2), 131–137.
- Sharma, P., & Carney, M. (2012). Value creation and performance in private family firms: Measurement and methodological issues. *Family Business Review*, 25(3), 233–242.
- Shleifer, A., & Vishny, R. W. (1986). Large shareholders and corporate control. *Journal of Political Economy*, 94(3), 461–488.
- Sirmon, D. G., & Hitt, M. A. (2003). Managing resources: Linking unique resources, management, and wealth creation in family firms. *Entrepreneurship Theory and Practice*, 27(4), 339–358.
- Sirmon, D., Hitt, M., & Ireland, R. (2007). Managing firm resources in dynamic environments to create value: Looking inside the black box. *Academy of Management Review*, 32(1), 273–292.
- Sorenson, R. L. (1999). Conflict management strategies used by successful family businesses. *Family Business Review*, 12(4), 325–339.
- Teece, D., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533.
- Vandekerckhof, P., Steijvers, T., Hendriks, W., & Voordeckers, W. (2015). The effect of organizational characteristics on the appointment of nonfamily managers in private family firms: The moderating role of socioemotional wealth. *Family Business Review*, 28(2), 104–122.
- Vandekerckhof, P., Steijvers, T., Hendriks, W., & Voordeckers, W. (2018). Socio-emotional wealth separation and decision-making quality in family firm TMTs: The moderating role of psychological safety. *Journal of Management Studies*, 55(4), 648–676.
- Wagner, D., Block, J. H., Miller, D., Schwens, C., & Xi, G. (2015). A meta-analysis of the financial performance of family firms: Another attempt. *Journal of Family Business Strategy*, 6(1), 3–13.
- Wang, E. C. (2007). R&D efficiency and economic performance: A cross-country analysis using the stochastic frontier approach. *Journal of Policy Modeling*, 29(2), 345–360.
- Yu, A., Lumpkin, G. T., Sorenson, R. L., & Brigham, K. H. (2011). The landscape of family business outcomes: A summary and numerical taxonomy of dependent variables. *Family Business Review*, 25(1), 33–57.
- Zattoni, A., Gnan, L., & Huse, M. (2015). Does family involvement influence firm performance? Exploring the mediating effects of board processes and tasks. *Journal of Management*, 41(4), 1214–1243.
- Zellweger, T. M. (2017). *Managing the family business: Theory and practice*. Cheltenham: Edward Elgar Publishing.
- Zellweger, T. M., & Astrachan, J. H. (2008). On the emotional value of owning a firm. *Family Business Review*, 21(4), 347–363.
- Zellweger, T. M., Kellermanns, F. W., Chrisman, J. J., & Chua, J. H. (2011). Family control and family firm valuation by family CEOs: The importance of intentions for transgenerational control. *Organization Science*, 23(3), 851–868.

# Innovation and Internationalization as Efficiency Engines for Family Businesses: Analyzing the Case of Portugal

Joana Costa

**Abstract** Not rarely, family businesses (FBs) are central to the economy; in Portugal the estimated impact of these structures reaches two-thirds of the GDP, absorbing half of the labor force and ascending to 80% of the firms in operation. Most of them are SMEs, but there are also FBs quoted on the stock exchange. These organizations play a central role in job creation, local development, long-term knowledge transfer, and territorial cohesion. The development of innovative activities is a critical factor for a competitive economy, yet innovation exposes firms to increased risks. FBs are often considered as conservative and risk-averse, resisting change. They prefer relying on internal factors rather than opening their structure to the external environment, consequently postponing innovation, thus pledging their future. The literature is not consensual in tying innovation with FBs. On the one hand, there is a strong belief that these firms have a reduced propensity to innovate due to their embedded culture; on the other hand, and due to values as loyalty and trust and informal networks, they will be more prone to develop either individual or collective innovation processes. Using a dataset of 110 family firms located in Portugal, we aim at observing the role of innovation and internationalization along with other structural characteristics to their economic performance. A multivariate model is applied to provide evidence reinforcing the determinant role of innovation, exports, and human capital in the performance of family firms. A deep understanding of the effective role of innovation, internationalization, and other structural characteristics of FBs will shed some light on the determinants of their economic performance, productive potential, longevity, and success. Given the importance of these structures, effective policy schemes should be designed, reinforcing the cohesion of the industry.

**Keywords** Family business · Innovation · Exports · Multivariate analysis

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## 1 Introduction

Family businesses (FBs) are pillars of the economic activity at the regional, sectoral, and national level. Despite being numerous, these organizations cannot fit a single character as their essence is plasticity. Their contributions are multifeatured, highlighting wealth creation and value added, technological takeoffs, knowledge transfer, start-ups, and business ideas on one hand and self-employment, job creation, organization governance, and innovation on the other, allied to the development and consolidation of human capital. The generation of successful innovation cycles is determinant to the economic performance of firms and the economy. Innovative activities relying on the creation of new products or processes will raise efficiency, productivity, and rationalization of the cost structure, thus boosting competitive advantages. Innovative firms grow more rapidly concerning employment and profitability (Geroski et al. 1993). Firms' and industry-specific characteristics may speed up innovation achievements (Acs and Audretsch 1987).

The study aims at systematizing the determinants of economic performance of FBs notwithstanding their number; these structures are scantily analyzed, mostly in what concerns critical factors of success and desirable structural characteristics. Besides this characterization and relevance discussion, we expect to offer policy recommendations to reinforce the performance of FBs and put these organizational structures in the policy agenda.

Understanding the full dimension of innovation on FBs is determinant as the literature is ambiguous, stating either that they are less prone to innovate due to their conservativeness or that they are more flexible, thus more capable of establishing formal and informal innovation channels. Still, the evidence reinforces the positive effect of innovation on FBs' economic performance, so efforts should be made to nourish the innovative milieu inside the FBs' community.

A particularly unique feature of this paper is that it gathers a sample of 110 firms operating in different economic sectors, with different technological intensities and sizes. The analysis of the productivity performance is run considering the GVA per worker, and it aims to clarify into the hindering factors of FBs' success and produce some policy recommendations in order to incentivize and finance the innovative activities of FBs as it is proved that they will enhance their profitability and consequently longevity. Moreover, as FBs are the backbone of the economic activity in most of the sectors, it is important to get a deep understanding of the determinants of their accomplishments, highlighting some desirable changes to improve their performance and the exploitation of market opportunities.

The econometric estimations prove that the firm economic performance relies much more on the innovation strategy and the internationalization strategy based on export intensity, rather than on general structural characteristics such as size and technological or R&D intensity.

The remainder of the paper is structured as follows. Section 2 presents the theoretical background of FBs and their structural characteristics. It also discusses the role of innovation and internationalization along with other relevant structural

characteristics. In Sect. 3 database, hypothesis, methodology, and econometric modeling are defined. Section 4 presents the econometric estimation and the discussion of the results. Finally, Section 5 concludes and addresses some policy recommendations.

## 2 Critical Literature Review

Every so often, FBs are classified as the most complex and challenging sectors to analyze in either the theoretical or the empirical context. This type of business varies from non-technological activities to intensive technological areas. Transversally existing in the different economic sectors from a small size to a multinational dimension, being small-sized their most common dimension. It is of worth mentioning that, worldwide, the most important companies are FBs; due to their particular features, combining economic and emotional aspects, they deserve the academics' attention.

Innovation is a factor of growth and economic performance in FBs (Nieto et al. 2015; De Massis et al. 2015). Further, boosting the performance and the rate of innovation reinforces survival and creates advantages from competitors (De Massis et al. 2016). Hence, innovation will reinforce the long-term performance of FBs (Pizzurno and Alberti 2013).

### 2.1 *Family Business: The Conceptual Framework*

FBs are the most profuse business structure and are considered essential for economic growth and sustainability (Anderson and Reeb 2003). However, no universal definition of FBs can be found in the literature (Miller et al. 2007; Siebel and Aufseb 2011).

Entirely consensually, one may state that these firms are wielded by family management, and some of the family members have positions in the company (Miller and Le Breton-Miller 2006).

Two theoretical proposals are most widely accepted in the academic community: the first relies on components of involvement approach classifying FBs according to the percentage of shares held by family members (Siebel and Aufseb 2011). So, Chrisman et al. (2004) classify the firm as FB if the family owns most of the equity; it is noteworthy that, presently in Europe, a firm is classified as FB if the family owns 25% or more of its shares.

The second definition, relying on the “essence approach model”, considers that the family's direct involvement is necessary for day-to-day operations (Shanker and Astrachan 1996). To Eddleston et al. (2012), a business can be considered FB when there is presence of daily family involvement in managerial decisions and strategy and there is emotional attachment (Chua et al. 1999).

For sure, relying on different conceptual frameworks, the empirical results may diverge (Chrisman et al. 2004). So, we opt for restricting FBs to those firms in which the family owns equity such that family members control the strategic and managerial decisions in a continuous perspective, playing active roles in operations and management.

Under a quantitative perspective, our definition will be materialized through labeling a firm as a family business if the majority of equity is in the possession of the family (Claver et al. 2008; Kontinen and Ojala 2010; Swoboda and Olejnik 2013; Piva et al. 2013).

## 2.2 *Innovation in FBs*

Successful firms, either FBs or not, are involved in innovative activities to improve their performance in what concerns the cost structure and the advantage of their products compared to the competitors. Sectoral and firm characteristics are identified as determinants and advantages in producing tangible and intangible innovation (Acs and Audretsch 1987, 1988).

The existence of firms pursuing innovative activities is a critical factor for a competitive economy, yet innovation exposes firms to additional risks. In the innovation process, failure can be inevitable; the outcome of innovation projects is uncertain and thus risky. Consequently, the price to be paid to investors must be higher independent on relying on internal or external sources of finance due to the increase risk. Very often, FBs are labeled as highly conservative and, consequently, less attracted to innovation. However, neglecting the innovation may condemn FBs to failure.

When firms launch innovation activities, they draw forecasts, but they do not know, for sure, the propensity to succeed, profitability, or drawbacks. Projects concerning innovative activities are unattractive to external investors as they cannot control the outcomes; information asymmetries will disincentivize venture capital due to the lack of warranties, as intangible assets are unaccepted collaterals (Costa et al. 2018). FBs may have mixed feelings about this agenda as they have reliable information, but they may lack internal finance.

The family ownership effect on the innovative performance divides the academic opinion (Anderson and Reeb 2003); to some authors, being a familiar structure reinforces the innovation culture (e.g., Kim et al. 2008), and to others, due to conservativeness and embeddedness, the propensity to innovate will fall (e.g., Munari et al. 2010). Transversally one can accept the singularities of FBs will be reflected in their innovation processes.

Innovation success is positively influenced by firm culture; experience in innovation projects; availability of managerial and operational skills among the R&D team and on the staff; coherent innovation strategy; coherence between the management and the innovative strategy; compatibility of the research with firm competences; organization flows; competitive prices; and market opportunity (van der

Panne et al. 2003). FBs are to some extent more flexible to adjust toward these vectors and consequently to boost success.

However, a large number of firms may survive or even grow with no innovation due to product characteristics; indeed, not all sectors rely upon innovation. For strategic reasons, some FBs may opt not to innovate and to imitate their competitors, but the accurate measurement of the effect of these actions on their economic performance should be done to make this decision process as enlightened as possible.

Due to the desirability of these actions, public policies should be encouraging innovative attitudes and providing funds to FBs in their innovation strategies allowing them to start up new ideas, to consolidate their position in the market, or even to survive.

Understanding the full dimension of innovation inside these particular business structures is of central importance due to the penetration of these structures inside the economic fabric and the significant role they play in the stabilization of either the labor market or the business cycle.

### ***2.3 Internationalization in FBs (Export Intensity)***

The internationalization process may help FBs in their long-term success, as it will provide the expansion to new markets, the exploitation of economies of scale, and the access to diversified tangible and intangible resources. The market is already global, and firms have to decide to approach this scenario actively or passively; those actively intervening in the process have to adapt themselves to the internationalization paradigm and need to adapt their organizational structure to meet the requirements of the new markets. This experience is hard to acquire. Still, the involvement of family members will help to overcome the barriers, and, moreover, FBs are committed to longevity and are, therefore, more likely to make this effort (Gallo and Sveen 1991).

The economic performance of a company improves when involved in international markets (Kontinen and Ojala 2010; Hagemeyer and Kolasa 2011; Swoboda and Olejnik 2013; Piva et al. 2013). The internationalization process reinforces competitiveness and demands for plasticity in the organizational structure. The exposition to increased competition internally and internationally pushes the firm toward the constant to seek for improvement and efficiency (Kafouros et al. 2008).

FBs may be uncomfortable in this process as they fear the loss of identity and control during this process; hence, it is this individual preservation that will be determinant for the success of the internationalization process itself. Also, the unwillingness to approach the new markets by network establishments will jeopardize the success of the operation (Gomez-Mejia et al. 2011; Pukall and Calabrò 2014). In sum, it is desirable that FBs approach internationalization with robust strategies and identity preservation as these will raise the probability of success, boosting their efficiency and longevity.

## **2.4 *Human Capital and Managerial Skills in FBs***

The ability to innovate depends on the skills acquired by the firm, such as technological accumulation, efficiency in the innovation process, and recognition of the usability of external knowledge to its assimilation and commercial application (Cohen and Levinthal 1990; Dosi et al. 1988; Lall 1992).

At the macroeconomic level, it is widely accepted that education promotes growth (Ganotakis and Love 2012); when moving to firm level, it is also proved a definite connection between human capital intensity and firm survival (e.g., Collier et al. 2011; Herstad et al. 2013).

Successful managers usually have members with a greater variety of skills (West and Noel 2009), and the success of R&D projects relies on the managers' competences (Chen et al. 2012).

Overcoming the consensual need for skills in abstract, having a wide variety of competences provides the manager a different ability to face daily obstacles (Koellinger 2008). So, the availability of a variety of educated staff members along with a multilayer manager's competences will reinforce the economic performance of the firm.

## **2.5 *Determinants of Economic Performance***

The understanding of the economic performance on FBs is of significant interest as the traditional literature focus on performance as a result of the availability of resources, but, more recently, the focus is put on governance. FBs have singularities in their governance which make them different from other organizational structures.

Another pillar of economic performance is innovation, as the introduction of new products and practices will boost the present and the future productive potential. Experience enables the firm to capitalize upon learning-by-doing and learning-by-failing effects. The first improves the firm's R&D efficiency, and the latter allows the firm to overcome its weaknesses (Maidique and Zirger 1985; Zirger 1997; García-Vega and López 2010).

The studies on the factors affecting economic performance can be divided into homogeneous groups: the first are strong ties to the manager and its competences relying on his explicit and tacit competences. The second explains the economic performance based on firm characteristics, and the third connects the firm's economic performance with the business environment.

To us, the determinants of FBs' economic performance will be linked to the first and the second branches, which means that our model will combine the firm and the manager proxies to explain the economic performance. Again, the primary purpose is to understand the direct and indirect effect of innovation, allied to internationalization as a determinant factor of FBs' success and longevity (Table 1).

**Table 1** Innovation performance of FBs

	Strategies		Used	Total
Product innovation	As a single type of innovation	<i>n</i>	2	69
		%	1.82%	
	Combined with others	<i>n</i>	67	
		%	60.90%	
Process innovation	As a single type of innovation	<i>n</i>	3	68
		%	0.27%	
	Combined with others	<i>n</i>	65	
		%	59.09%	
Technological innovation	As a single type of innovation	<i>n</i>	5	61
		%	4.55%	
	Combined with others	<i>n</i>	56	
		%	50.91%	
Organizational innovation	As a single type of innovation	<i>n</i>	4	71
		%	3.64%	
	Combined with others	<i>n</i>	67	
		%	60.90%	
Marketing innovation	As a single type of innovation	<i>n</i>	3	68
		%	2.73%	
	Combined with others	<i>n</i>	65	
		%	59.09%	

Source: Author’s computation based on the sample

## 2.6 Hypothesis of the Research

Young and small- and medium-sized firms pursuing these risky actions such as innovation or internationalization processes may fall in severe financial problems (Hadjimanolis 1999). Larger firms have an increased capability to take risks, to exploit new ideas, to dilute fixed costs connected to innovation and internationalization, and to achieve greater financial possibilities.

Organizations with a more significant number of workers will have more potential to benefit from economies of scale, therefore being more interested in innovation along with market expansion abroad (Piva et al. 2013). Their potential regarding staff skills is also enlarged (Giovannetti et al. 2013), and due to the organizational structure, the workers can concentrate on particular tasks, enhancing the learning effect. This fact will raise productivity due to repetition boosting the overall firm performance.

**Hypothesis 1** Size will positively affect FBs’ economic performance.

Despite constraining, according to Sluis et al. (2008), the formal education of the manager is a good proxy for its decision aptitudes. So, skilled managers will decide more efficiently, thus raising the economic performance of the FBs. Moreover, qualified managers and staff will have a higher propensity to enroll innovative

processes and promote the absorption and the development of new ideas reinforcing, directly and indirectly, the economic performance (Marrocu and Paci 2012).

**Hypothesis 2** Skilled managers will positively affect the economic performance of FBs.

Such factors moderate the relation between R&D intensity and innovative output as regional knowledge spillovers, demand-pull effects, or differences in technological opportunity. Experience enables the firm to capitalize upon learning-by-doing and learning-by-failing effects. Whereas the first improves the firm's R&D efficiency, the latter exposes the firm's weaknesses (Maidique and Zirger 1985; Zirger 1997; García-Vega and López 2010).

Piva et al. (2013) highlight the fact that FBs operating in technology-intensive sectors tend to be more dynamic and more prone to develop innovation and internationalization processes.

FBs operating in sectors with higher dynamism will have the skills to absorb the externalities from their environment and generate internal synergies consequently raising their economic efficiency.

**Hypothesis 3** Technological and R&D intensity will increase FBs' economic efficiency.

Internationalization is a multidimensional process of cross-border flows and activities. This can be classified as a growth strategy for companies. Therefore, pursuing this action will lead to enlarged market opportunities and scale effects among others.

Those who opt for not embracing internationalization may become uncompetitive because of the obsolescence of their products and processes. Companies operate under volatile environments facing global competition standards, shorted product, and technology life cycles; and shifting consumer demands are forced to become stronger.

**Hypothesis 4** Having an internationalization strategy raises the economic performance of FBs.

Top educated workers will enhance the development of innovations, boosting the absorptive capacity. The human resources by using their skills will allow the firm to behave as an innovator or as an adopter. These human means will solve the problems on a daily basis, so the innovative processes have no reason to be delayed or postponed. More educated workers will raise the productivity level probability of internationalization and innovation; in other words, human capital boosts economic performance.

**Hypothesis 5** Human capital intensity is directly connected to the economic performance of FBs.

Innovation activities are by nature highly risky. When successful, these actions will produce high payoffs, although the probability of failure is high. FBs due to their

loyalty values, family involvement, and commitment to longevity will develop activities to meet the requests of the market changeovers.

**Hypothesis 6** Innovation increases FBs' economic efficiency.

### 3 Structural Traits of the Database

The sample comprises 110 FBs operating in Portugal. Firms were asked about their structural characteristics and their economic performance among other variables; this data will be used to highlight the role of innovation and internationalization in the economic performance of FBs.

#### 3.1 Database

The analysis will comprise a sample of 110 Portuguese family businesses<sup>1</sup> included in the AICEP<sup>2</sup> database, operating in different economic sectors, with several sizes, technological regimes, innovative strategies, and other structural characteristics. A general overview of the sample was run to identify the biasedness or eventual insignificance of certain groups.

The database provides direct information about the economic performance of FBs, their innovation and internationalization strategy, a set of firm structural characteristics such as firm size, SIC code, economic sector, technological intensity, education intensity, and R&D intensity which will be used to run the econometric estimations.

##### 3.1.1 Size, Sector, and Managerial Skills

In our sample, there is a substantial prevalence, around three quarters; 83 of the firms are classified as small (up to 49 workers in their staff). The other 27 are medium-sized firms, and no firm inside the sample has more than 250 workers (to be classified as large). This proportion is quite bonding to the reality, as most of the firms are small.

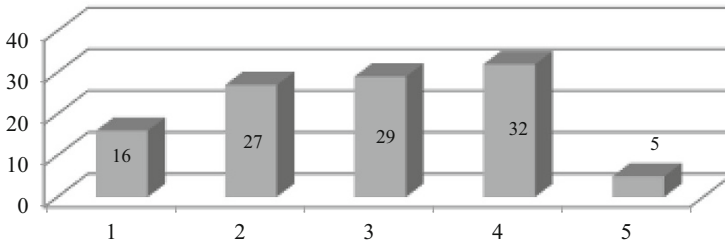
In terms of the economic sector, FBs do operate in different sectors; in our sample, all economic sectors are covered. Manufacturing firms play a determinant role due to their natural connection to the research question, 57 firms of the sample.

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<sup>1</sup>The present database was kindly provided by Aurora Teixeira to whom I am indebted for the feasibility of the empirical analysis. An extended treatment of this data with different focus was made in a FEUP thesis from Pedro Oliveira (2011).

<sup>2</sup>Agência para o Investimento e Comércio Externo de Portugal, E.P.E.





**Fig. 1** The proportion of firms per technological intensity. Source: Author

Other firms arising from the different SIC codes belonging to the industry are 48% of the sample, 53 firms.

Concerning managerial skills, our results are quite balanced; almost half of the sample, 53 managers, have an undergraduate in either engineering or economics, and 57 do not have an undergraduate degree. This result reinforces the idea that FBs have professional and qualified managers. In some cases, there is a preconceived idea that these organizations perform poorly because of the lack of formal competences of their managers; this is proved not to be the case.

### 3.1.2 Technological Intensity

According to the classification proposed by Tidd et al. (2005), the firms in the sample were divided into five categories from the less intensive in technology to the most intensive in technology. The distribution appears as follows (Fig. 1).

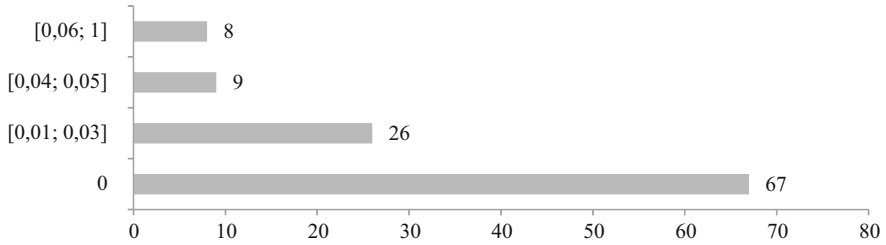
In general terms, nearly 15% of the firms operate in low-tech sectors (category 1); half of the sample operates in mid-tech sectors (categories 2 and 3); and the remaining 35% operate in high-tech sectors.

### 3.1.3 R&D Intensity

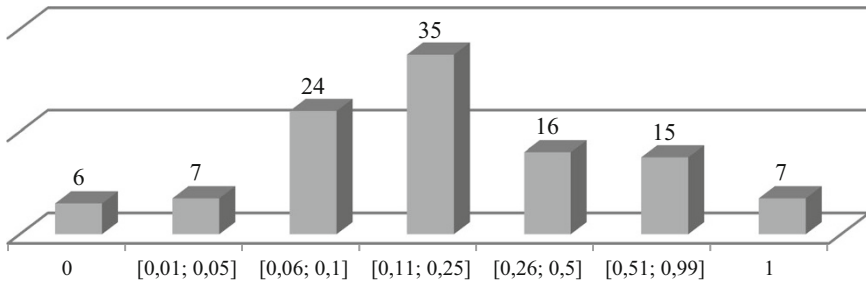
The number of firms reporting expenditures in R&D is 43; almost 60% of them devote from 1% to 3% of their total revenue to this item. The other 40% of firms reporting expenses in R&D are equally distributed in the second [0.04; 0.05] and the third [0.06; 1] intervals. This result reinforces that a significant proportion of firms do not devote resources to inputs to innovation (Fig. 2).

### 3.1.4 Skill Intensity

There is a generalized belief that firms will be more productive if their staff has the formal education to perform current tasks and to absorb new knowledge. The human component is determinant in firm success and sustainability (Fig. 3).



**Fig. 2** The proportion of firms per R&D intensity. Source: Author



**Fig. 3** The proportion of firms per skill intensity. Source: Author

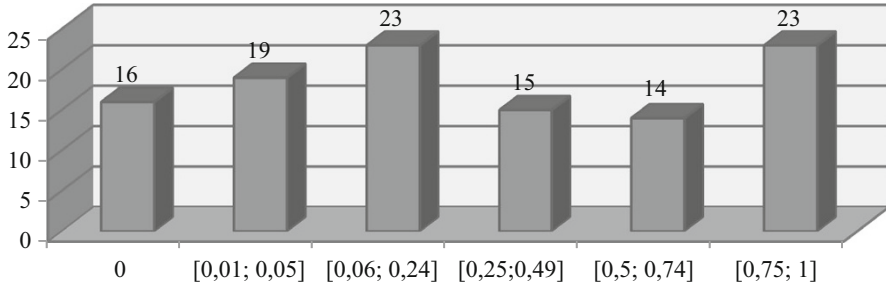
According to the literature, our measure for the skills of the employees consists of having an undergraduate or more. In the sample, 5% of the firms do not have any undergraduate among their workers. However, 60% of the FBs in the analysis have up to 25% of their workers with an undergraduate. Moreover, 6% of the firms have their entire staff with an undergraduate or more.

FBs with higher dotation of human capital will have an improved ability to perform in different domains, thus raising efficiency.

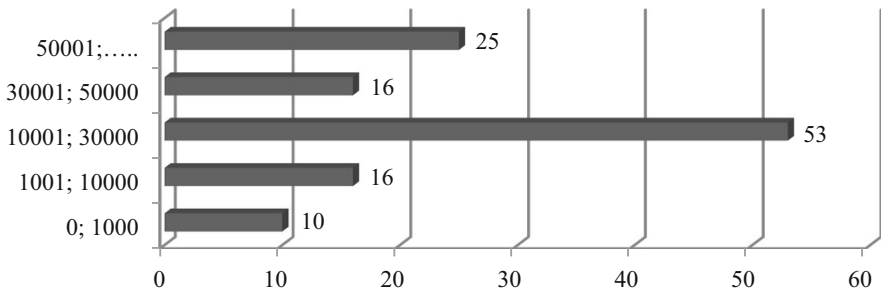
### 3.1.5 Export Intensity

Internationalization plays a determinant role in the firm’s efficiency. In our case, the measurement of internationalization perspective relies on the export intensity (the proportion of sales abroad compared to the total sales) (Fig. 4).

Surprisingly, our sample has an important proportion of FBs operating in foreign markets. One-fifth of the firms sell their entire production to the rest of the world. Moreover, 47% sell more than 25% of their products to foreign consumers. The sample evidenced the dynamism of the FBs, reinforcing their efforts to promote efficiency.



**Fig. 4** The proportion of firms per export intensity. Source: Author



**Fig. 5** The proportion of firms per productivity level—GVA per worker. Source: Author

### 3.1.6 GVA Per Worker

Our measurement of productivity relies on the GVA per worker, measured in euros and a yearly base.

The sample is quite heterogeneous with firms ranging from up to 1.000€ to firms with more than 50.001€ per worker. The most frequent interval goes from 10.001 to 30.000€, being mentioned by 53 firms (Fig. 5).

## 4 Econometric Estimations

In this section, underlying theoretical arguments will be compared to the estimation results. To recap the previous debate, Table 2 enounces the hypothesis and the results. Subsequently, some discussion will be presented.

### 4.1 Model Specification

The analysis of the determinants of the economic efficiency of FBs will be modeled utilizing multivariate regression with three explanatory variables and four controls.

**Table 2** Summary of the hypothesis in the analysis

Hypothesis	Description	Results
[H1]	Size will positively affect FBs’ economic performance	Unsupported
[H2]	Skilled managers will positively affect the economic performance of FBs	Unsupported
[H3]	Technological and R&D intensity will increase FBs’ economic efficiency	Unsupported
[H4]	Having an internationalization strategy raises the economic performance of FBs	Supported
[H5]	Human capital intensity is directly connected to the economic performance of FBs	Supported (opposite direction of the effects)
[H6]	Innovation increases FBs’ economic efficiency	Supported

Source: Author’s composition according to the literature and the econometric results

The objective is to get a full understanding of the role of innovation, internationalization by exports, and human capital in the economic performances of FBs.

It is also important to understand the existence of eventual scale effects, the importance of the managerial competences, the technological regime, and the investment in innovation (R&D intensity).

## 4.2 Operationalization (Proxies)

To examine the determinants of economic performance at the firm level, in the FBs, the endogenous variable (*GVA\_WORKER*), will be continuous. It was built taking the logarithm of the gross value added per worker (euros per year).

As explanatory variables, the model includes the *EXP\_INTENSITY*, measured as the proportion of exports in the total revenue of the FB. The *HCAP\_INTENSITY* quantified as the proportion of employees with at least an undergraduate degree over the total.

Additionally, the innovative performance (*INNOV*) was measured utilizing a count variable, which includes values from 0 to 4 depending on the number of innovation types performed by the firm (product, process, marketing, organizational).

The controls appraise structural characteristics such as dimension (*LN\_SIZE*), which is the logarithm of the total workers. The effect of management qualification is controlled by the variable *MAN\_SKILL* (a binary variable that takes the value 1 of the manager has an undergraduate in either engineering or economics and 0 otherwise).

The technological intensity assessment is twofold: (*TECH\_INSTENSITY*<sup>3</sup>), being, therefore, a multinomial scale, from 1 to 5, increasing regarding the

<sup>3</sup>The taxonomy adopted follows Tidd et al. (2005). *Managing innovation: Integrating technological, market and organizational change*, 3rd edition. John Wiley & Sons.

technology required in performing the economic activity; (*R&D\_INTENSITY*) measures the expenditures in R&D activities compared to the total revenue.

In some cases, the logarithmization was run to smooth the dispersion of the variable, therefore producing elasticities as effects.

### 4.3 *Econometric Estimations*

A multivariate model was used to assess the determinants of economic performance of FBs. Most of the variables are positively correlated with a moderate degree of significance. The economic performance of the firms will be approached by the structural characteristics and the explanatory variables.

The sample comprises 110 firms, and the model appears as statistically significant at the global level, and the R-squared is approximately 19.3%.

Firms, independent of being family owned or not want to grow and succeed, nevertheless, small sized may face efficiency and innovation constraints, being incapable to exploit market opportunities as fast as their large sized counterparts. Large firms are often slow and rigid in their decision-making processes, and that may work as a barrier to innovate. So, being small may speed up the ability to accommodate market volatility. Conversely, small firms may lack the availability of financial and human resources to adopt innovation and raise economic performance. However, in our estimation, the elasticity of productivity concerning size fails to be statistically significant. So, despite the previous belief, dimension fails to affect firms' economic performance.

The effect of the CEOs undergraduate in engineering or economics does not affect the productivity levels. So, it seems that the education intensity of the manager fails to affect productivity.

Concerning the R&D and technological intensity, the effect fails to be statistically significant. These results contradict the literature, as according to Artz et al. (2010) and Giovannetti et al. (2013) R&D and technological intensity improve the economic performance. Additionally, those firms investing in R&D may benefit from increasing returns to scale, leveraging efficiency. Hence, according to Broekaert et al. (2016), family businesses are less involved in R&D.

Moreover, according to Giovannetti et al. (2013), this input to innovation is directly connected to the propensity to export, thus producing a double effect on efficiency, which fails to be proved in our model.

Innovation is a strategic option and part of general firm behavior, though it is part of the long-term success of any firm; so, FBs following this strategy will be expectably more efficient. The relevance of innovation in FBs is assessed in the next-generation family business (Deloitte University EMEA CVBA 2017), and the majority of respondents reinforce the inclusion of an innovation in their firm culture and mission statement.

Investment in R&D are inputs to innovation, which combined with the technological regime, the availability of human capital and the managerial competences

**Table 3** Values in italic reinforce that those two coefficients are the only ones being statistically significant

Dependent variable: productivity (yearly gross value added per worker in logarithm)					
Variable	Description	Estimate	SE	T-Statistic	P-Value
TECH_INSTENSITY	Intensity of technology	-0.076	0.179	-0.423	0.673
Man_Skill	Education of managers	0.385	0.440	0.876	0.383
EXP_Intensity	Exports to sales	<i>1.667</i>	0.580	2.875	0.005
R&D_INTENSITY	R&D to sales	5.810	5.539	1.049	0.297
HC_Intensity	Proportion of undergraduates	<i>-1.473</i>	0.824	-1.788	0.077
INNOV	Innovation types	<i>0.266</i>	0.144	1.854	0.067
SIZE	ln (no. of workers)	0.102	0.198	0.512	0.610
Constant		8.247	0.977	8.437	0.000

Source: Author’s computation based on the OLS estimation for the FBs’ sample

will boost innovative capacity. Innovation outputs will evidence the accuracy of the combination.

Enlarging the innovation projects will create an advantage compared to the competitors, improve the market share, and benefit from monopoly conditions (Roberts 1999). Still, Kim et al. (2008), Llach and Nordqvist (2010), and Werner et al. (2018) state that family firms are more prone to be innovative due to their organizational values, reinforcing the existence of formal and informal knowledge transfers supported by loyalty in relationships, surviving in the long run.

For each unitary increase in the collection of innovation types being performed, the productivity rises by 26.6%. These results reinforce those existing in the literature (Hua and Wemmerlöv 2006; Artz et al. 2010; Li et al. 2010) despite the difference regarding the proxy in use.

Regarding the export intensity, the results reinforce the evidence from the literature with a positive effect. The unitary change in the export intensity raises the GVA per worker by 166.7%. On average, the higher the export intensity, the higher the productivity levels. This result goes along with the evidence from Piva et al. (2013).

Concerning the human capital intensity, the effect is statistically significant, despite our expectation that the increase in the proportion of workers with an undergraduate should raise the GVA\_per\_worker. This result is hardly explainable, even though it may be linked to other structural characteristics or even the innovation strategy (Table 3).

## 5 Conclusions

The purpose of the present chapter was to empirically test the determinants of productivity in FBs, highlighting the role of innovation and internationalization strategies along with other reinforcing structural characteristics. The analysis relies

on the Portuguese evidence as these organizations are the backbone of the economy concerning either income generation or job creation.

The existence of FBs is determinant regarding sustainability, avoidance of downturn unemployment and social exclusion; as a consequence, authorities should develop policy packages aiming to support this types of business structures.

Portugal is classified as a moderate innovator (EIS 2018), so expectably its firms present a poor performance regarding innovation and internationalization. Hence, on one hand these variables are critical to substantial success, and on the other, FBs are expected to perform in these domains below the average.

According to Schumpeter Mark I or II, firm size should affect the propensity to perform the innovative activities. Still, the econometric results point to the irrelevance of size concerning the economic efficiency of FBs. These findings shed some light on the preconceived idea that size is relevant, and, as seen it is not important as a determinant of economic performance.

The irrelevance of size should convince that large firms should not absorb the public funds. The same should be done to specific sectors of activity as they are shown as irrelevant as determinants of economic performance, so efficient firms should be granted rather than specific clusters.

This finding is of particular interest as policy-makers frequently argue in favor of fiscal benefits to be granted to large firms as they are seen as primary job creators and innovation anchors central to the creation of prosperity cycles. The support to FBs may reinforce the establishment of informal networks and of cohesive territories due to their strong ties with the community.

Expenditures in R&D or even R&D intensity fail to be significant in affecting the economic performance of FBs; this reinforces the idea that the economic performance cannot be preconceived; the structural characteristics of the firm seem to play a minor role compared to innovation or internationalization. Again, special attention should be put in the analysis of this connection as the firm size maybe hampering this dimension; our sample is mostly composed of SMEs which may be unable to scale up the investments in those inputs to innovation. Eventually, universities or public institutes could help in overcoming eventual drawbacks as these external sources of relevant knowledge to innovation could perhaps minimize exiguity.

The availability of skilled labor force among the staff members should raise the effectiveness of the innovative activities as well as economic performance, but, in this case, the effect is contrary to what is expected. Eventually, there is a negative trade-off between increased productivity and wage differentials; FBs with troubles hiring qualified personnel are also more vulnerable to innovation and internationalization failure. Once more, the role of the academia can be determinant as undergraduates are vehicles of knowledge transfer, needing more consistent capabilities to become attractive assets for FBs.

Notwithstanding, the innovative strategy of FBs cannot be neglected by the authorities when designing the policy instruments, as being an innovator raises the economic efficiency. Besides, our findings highlight a twofold reality: FBs performing innovation are more efficient, and each type of innovation added reinforces the productivity growth.

The internationalization strategy of FBS is also the key to success. Reinforcing the presence in foreign markets will push the firm to a highly competitive layer. FBs lacking some competences may fear some structural constraints regarding development, adoption, or diffusion of the novelties, preferring to abort the projects rather than wasting the endowments of resources. In this case, the establishment of solid connections with the academia or other firms may help the FBs. Policy schemes should reinforce the desirability of this behavior.

These results reinforce the theoretical complementarity of these two aspects of firm behavior, considering the biunivocal connection between innovation and internationalization. Together, they will generate exponential effects concerning the FBs' performance. Relying on the triple helix<sup>4</sup> may be the cornerstone to the improvement of the overall FBs' performance.

Considering the recent changes operated in Europe and the efforts in place to implement policies such as the RIS3 (Regional Innovation Strategy for Smart Specialization), dissimilar attention should be paid this type of businesses due to their importance in the socioeconomic domains.

To some extent these results point to the need for a redesign of the policy-making, separating this type of businesses due to their singularities. All the more, a cohesive multilevel policy strategy should be applied as these organizations are critical players in the promotion of local development and pillars of inclusive communities. The future brings significant challenges as trust must be reinforced, and it seems that the proximity structures are more engaging to individuals.

## References

- Acs, Z., & Audretsch, D. (1987). Innovation, market structure, and firm size. *The Review of Economics and Statistics*, 69(4), 567–575.
- Acs, Z., & Audretsch, D. (1988). Innovation in large and small firms: An empirical analysis. *American Economic Review*, 78, 680–681.
- Anderson, R., & Reeb, D. (2003). Founding-family ownership and firm performance: Evidence from the S&P 500. *Journal of Finance*, 58(3), 1301–1328.
- Artz, K. W., Norman, P. M., Hatfield, D. E., & Cardinal, L. B. (2010). A longitudinal study of the impact of R&D, patents, and product innovation on firm performance. *The Journal of Product Innovation Management*, 27, 725–740.
- Broekaert, W., Andries, P., & Debackere, K. (2016). Innovation processes in family firms: The relevance of organizational flexibility. *Small Business Economics*, 47, 771–785.
- Chen, Y., Chang, K., & Chang, C. (2012). Nonlinear influence on R&D project performance. *Technological Forecasting and Social Change*, 79, 1537–1547.
- Chrisman, J. J., Chua, J. H., & Litz, R. A. (2004). Comparing the agency costs of family and non-family firms: Conceptual issues and exploratory evidence. *Entrepreneurship Theory & Practice*, 28(4), 335–354.

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<sup>4</sup>Framework firstly proposed by Etzkowitz and Leydesdorff in their article: The dynamics of innovation: from National Systems and “Mode 2” to a Triple Helix of university-industry-government relations.



- Chua, J., Chrisman, J., & Sharma, P. (1999). Defining the family business by behavior. *Entrepreneurship Theory and Practice*, 23(4), 19–39.
- Claver, E., Rienda, L., & Quer, D. (2008). Family firms' risk perception: Empirical evidence on the internationalization process. *Journal of Small Business and Enterprise Development*, 15(3), 457–471.
- Cohen, W., & Levinthal, D. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1), 128–152.
- Collier, W., Green, F., Kim, Y. B., & Peirson, J. (2011). Education, training and economic performance: Evidence from establishment survival data. *Journal of Labor Research*, 32, 336–361.
- Costa, J., Botelho, A., & Matias, J. (2018). Introduction. In S. Cubico, G. Favretto, J. Leitão, & U. Cantner (Eds.), *Entrepreneurship along the industry life cycle: The changing role of entrepreneurial activities and knowledge competences*. Cham: Springer.
- De Massis, A., Frattini, F., Pizzurno, E., & Cassia, L. (2015). Product innovation in family versus non-family firms: An exploratory analysis. *Journal of Small Business Management*, 53, 1–36.
- De Massis, A., Frattini, F., Kotlar, J., Messeni-Petruzzelli, A., & Wright, M. (2016). Innovation through tradition: Lessons from innovative family businesses and directions for future research. *Academy of Management Perspectives*, 30, 93–116.
- Deloitte University EMEA CVBA. (2017). *Next generation family businesses. Leading a family business in a disruptive environment*. Retrieved from <https://www2.deloitte.com/content/dam/Deloitte/ua/Documents/strategy/Next-generation-family-business.pdf>
- Dosi, G., Freeman, C., Nelson, R., Silverberg, G., & Soete, L. (1988). *Technical change and economic theory*. Pisa: Laboratory of Economics and Management (LEM), Sant'Anna School of Advanced Studies.
- Eddleston, K. A., & Kidwell, R. E. (2012). Parent-child relationships: Planting the seeds of deviant behavior in the family firm. *Entrepreneurship Theory & Practice*, 36(2), 369–386.
- European Commission. (2018). *European innovation scoreboard*.
- Gallo, M., & Sveen, J. (1991). Internationalizing the family business: Facilitating and restraining factors. *Family Business Review*, 4(2), 181–190.
- Ganotakis, P., & Love, J. H. (2012). Export propensity, export intensity and firm performance: The role of the entrepreneurial founding team. *Journal of International Business Studies*, 43(8), 693–718.
- García-Vega, M., & Lopez, A. (2010). Determinants of abandoning innovative activities: Evidence from Spanish firms. *Cuadernos de Economía y Dirección de la Empresa*, 13(45), 69–91.
- Geroski, P., Machin, S., & van Reenen, J. (1993). The profitability of innovating firms. *The Rand Journal of Economics*, 24(2), 198–211.
- Giovannetti, G., Ricchiuti, G., & Velucchi, M. (2013). Location, internationalization and performance of firms in Italy: A multilevel approach. *Applied Economics*, 45, 2665–2673.
- Gomez-Mejia, L., Cruz, C., Berrone, P., & de Castro, J. (2011). The bind that ties: Socio-emotional wealth preservation in family firms. *Academy of Management Annals*, 5(1), 653–707.
- Hadjimanolis, A. (1999). Barriers to innovation for SMEs in a small less developed country (Cyprus). *Technovation*, 19, 561–570.
- Hagemer, J., & Kolasa, M. (2011). Internationalisation and economic performance of enterprises: Evidence from Polish firm level data. *The World Economy*, 34(1), 74–100.
- Herstad, S., Sandven, T., & Solberg, E. (2013). Location, education, and enterprise growth. *Applied Economics Letters*, 20(10), 1019–1022.
- Hua, S. Y., & Wemmerlöv, U. (2006). Product change intensity, product advantage, and market performance: An empirical investigation of the PC industry. *Journal of Product Innovation Management*, 23(4), 316–329.
- Kafourous, M., Buckley, P., Sharp, J., & Wang, C. (2008). The role of internationalization in explaining innovation performance. *Technovation*, 28, 63–74.

- Kim, H., Kim, H., & Lee, P. M. (2008). Ownership structure and the relationship between financial slack and R&D investments: Evidence from Korean firms. *Organization Science*, 19(3), 404–418.
- Koellinger, P. (2008). Why are some entrepreneurs more innovative than others? *Small Business Economics*, 31, 21–37.
- Kontinen, T., & Ojala, A. (2010). Internationalization pathways of family SMEs: Psychic distance as a focal point. *Journal of Small Business and Enterprise Development*, 17(3), 437–454.
- Lall, S. (1992). Technological capabilities and industrialization. *World Development*, 20(2), 165–186.
- Li, Y., Su, Z., & Liu, Y. (2010). Can strategic flexibility help firms profit from product innovation? *Technovation*, 30, 300–309.
- Llach, J., & Nordqvist, M. (2010). Innovation in family and non-family businesses: A resource perspective. *International Journal of Entrepreneurial Venturing*, 2(3), 381–399.
- Maidique, M. A., & Zirger, B. J. (1985). The new product learning cycle. *Research Policy*, 14(6), 299–313.
- Marrocu, E., & Paci, R. (2012). Education or creativity: What matters most for economic performance? *Economic Geography*, 88(4), 369–401.
- Miller, D., & Le Breton-Miller, I. (2006). Family governance and firm performance: Agency, stewardship, and capabilities. *Family Business Review*, 19(1), 73–86.
- Miller, D., Le, B.-M., Isabelle, L., Richard, H., & Cannella, A. A. (2007). Are family firms really superior performers? *Journal of Corporate Finance*, 13(5), 829–858.
- Munari, F., Oriani, R., & Sobrero, M. (2010). The effects of owner identity and external governance systems on R&D investments: A study of Western European firms. *Research Policy*, 39(8), 1093–1104.
- Nieto, M. J., Santamaria, L., & Fernandez, Z. (2015). Understanding the innovation behavior of family firms. *Journal of Small Business Management*, 53, 382–399.
- Piva, E., Rossi-Lamastra, C., & De Massis, A. (2013). Family firms and internationalization: An exploratory study on high-tech entrepreneurial ventures. *Journal of International Entrepreneurship*, 10(1), 109–129.
- Pizzurno, E., & Alberti, F. (2013). Technology innovation and performance in the family firm. *International Journal of Entrepreneurship and Innovation Management*, 17, 142–161.
- Pukall, T., & Calabrò, A. (2014). The internationalization of family firms: A critical review and integrative model. *Family Business Review*, 27(2), 103–125.
- Shanker, M., & Astrachan, J. (1996). Myths and realities: Family businesses' contribution to the US economy, a framework for assessing family business statistics. *Family Business Review*, 9(2), 107–119.
- Siebel, J. F., & Aufseb, D. K. (2011). A review of theory in family business research: The implication for corporate governance. *International Journal of Business Review*, 14, 280–304.
- Sluis, J., Praag, M., & Vijverberg, W. (2008). Education and entrepreneurship selection and performance: A review of the empirical literature. *Journal of Economic Surveys*, 22(5), 795–841.
- Swoboda, B., & Olejnik, E. (2013). A taxonomy of small and medium-sized international family firms. *Journal of International Entrepreneurship*, 10(1), 130–157.
- Tidd, J., Bessant, J., & Pavitt, K. (2005). *Managing innovation – Integrating technological, market and organizational change* (3rd ed.). Chichester: Wiley.
- van der Panne, G., van Beers, C., & Kleinknecht, A. (2003). Success and failure of innovation: A literature review. *International Journal of Innovation Management*, 7(3), 1–30.
- Werner, A., Schröder, C., & Chlosta, S. (2018). Driving factors of innovation in family and non-family SMEs. *Small Business Economics*, 50, 201–218.
- West, G., & Noel, T. (2009). The impact of knowledge resources on new venture performance. *Journal of Small Business Management*, 47, 1–22.
- Zirger, B. (1997). The influence of development experience and product innovativeness on product outcome. *Technology Analysis & Strategic Management*, 9(3), 287–297.

# CEO's Entrepreneurial Profile and Survival of Internationalised Wine Sector SMEs in Portuguese Region of Ribatejo

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**Abstract** This study highlights the importance of the CEO's entrepreneurial profile, unveiling its importance for the survival and internationalisation of small- and medium-sized enterprises (SMEs) in the wine sector in the Portuguese region of Ribatejo. Evidence shows that CEOs, as individuals with a global mentality, are extremely alert and always ready to seek international opportunities to obtain additional benefits. To do so, they have to overcome different barriers in the course of the internationalisation process, determining the decision-making mechanisms that involve different modes of entry into new markets, always bearing in mind the sources of competitive advantage, in order to ensure greater financial sustainability and responsible profit sharing in the future. The empirical approach makes use of a qualitative methodology, based on interviews with the CEOs of two wine companies located in the Portuguese region of Ribatejo. This study provides important implications for strategic business process management aimed at overcoming obstacles to the internationalisation of wine-growing SMEs, through the choice of adequate entry modes.

**Keywords** CEO · Family wine industries · Internationalisation · SME

## 1 Introduction

When SMEs intend to move towards internationalisation, they face both internal and external barriers which limit their expansion (Roy et al. 2016). Competition in an increasingly unified and global market allows companies to place their product

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outside their country's borders, and for some firms it no longer makes sense to speak of country of origin because of their global expression and orientation (Felício et al. 2016). In some cases from their creation (Kalinic and Forza 2012), one of the immediate implications of that openness to global commerce is the greater competition firms face, and it is fundamental to ensure strategic management of business processes as well as establishing a business model allowing them to be more competitive in the international sphere (Child et al. 2017). SMEs are the predominant type of business organisation in countries belonging to the Organisation for Economic Co-operation and Development (OECD) and are also those contributing most to employment, making them the backbone of national economies (Paul et al. 2017).

The literature contains a well-established debate on the effects and challenges of internationalisation for SMEs in the wine-producing sector. However, deeper knowledge is needed about the mechanisms of strategic decision-making concerning forms of entry for successful internationalisation processes, especially for small- and medium-sized units. The continuing advancement of technology, together with the transformations occurring in the different economic blocks in general, and in Portugal in particular, in terms of production, social behaviour, wine culture, wine consumption, community support policies and market functioning, as well as the transformations taking place in other areas of the world in wine production, presents major challenges to wine producers in regions located in peripheral economies, as is the case of the Portuguese region of Ribatejo. Competition in the wine sector is growing in intensity, with success in the market being increasingly demanding.

Internationalisation can be understood as a complex, multidimensional decision-making process (Kraus et al. 2017), but recent decades have been marked by a significant growth in the number of companies opting for internationalisation from the first day of activity (Zucchella et al. 2007). The importance of studying the internationalisation of SMEs in the wine-producing sector is reinforced by the weight these companies represent in the global panorama of wine production and commercialization. Various SMEs have accelerated their international commitment by investing in distant countries, despite having limited knowledge of the market, the insipient use of networks and business-people's limited international experience (Kalinic and Forza 2012). Early internationalisation processes are the result of complex interactions between changes in the international market (Zucchella et al. 2007) and the use of networks, which are an essential lever in the strategy leading SMEs to increase their flexibility when competing with multinationals, i.e. exploiting opportunities to collaborate with large firms in order to compete successfully (Narula 2004).

Thinking precisely about the challenges CEOs often face when choosing, or not, internationalisation, this study explores the importance of the entrepreneurial profile of CEOs and their participation in implementing the entrepreneurial strategies organisations use when choosing to exploit the business opportunities identified, in order to successfully overcome the possible barriers to internationalisation in the wine-producing sector. Given the limited number of studies so far on the entrepreneurial profile of the CEO in that sector, the intention is to fill that gap by analysing a fundamental sector to increase the degree of internationalisation of endogenous

production, which includes certifying elements such as denominations of origin, and compete positively for differentiation and international comparability.

In this connection, the study aims to (i) identify the main obstacles to internationalisation and the ways to enter new markets, in a unified framework; (ii) propose a model showing the determinant role of the CEO in the success of internationalisation processes in SMEs in the wine-producing sector, through choosing the right forms of entry; and (iii) present case studies about the CEO's entrepreneurial profile in internationalised SMEs in the wine-producing sector and their influence on the construction of positive components, as well as in overcoming the negative components included in the matrix of competitive advantages, to ensure the survival of these internationalised SMEs.

The study is structured as follows. The literature review is followed by analysis of case studies of the CEO profile and the survival of internationalised companies in the wine-producing sector in the region of Ribatejo. The conclusions, limitations and future lines of research are then presented.

## 2 Literature Review

### 2.1 *SME Internationalisation Process*

SMEs contribute significantly to countries' economic success (Javalgi and Todd 2011), the reason for the scientific community's focus on the study of SMEs being strongly influenced by SMEs' growing involvement in international markets (Welch and Luostarinen 1988). This has attracted the attention of not only researchers but government bodies, given the results related to environmental restrictions, particularly the limited growth of the domestic market. SMEs are increasingly prepared to enter international markets (Tarek et al. 2016), as is the case of emerging (Asian) or transition (East European) economies, wishing to increase their domestic reputation and exploit their previous knowledge (Knight and Kim 2009). However, these companies can suffer from resource restrictions, such as the shortage of external capital resources, financial risk and uncertainty (Kim and Vonortas 2014). To lessen these important restrictions, previous research suggests participation in networks (Brouthers et al. 2015) to improve companies' competitive position (Van Gils and Zwart 2015) and so, earlier and earlier, SMEs engage in collaboration with other firms in a network, allowing them a greater degree of internationalisation. For the CEOs of SMEs that aspire to be internationalised units, it is fundamental to draw up strategies accordingly, considering forms of entry, resources, corporate image and reputation, as well as knowledge of the foreign market and human capital, assessing the potential partner firms and the tangible resources for SMEs to become established in the new market, with the double objective of reducing uncertainty and being better equipped for what they will find in the destination country (Manlio Del Giudice et al. 2011). A SME implements an internationalisation strategy when it decides to engage in international activities, following a pattern of activity to be

consistent over time, requiring the SME to acquire specific knowledge of the country concerning local markets, commercial practices and institutional conditions (Malo and Norus 2009).

As for the ways in which wine-sector SMEs have approached the international market, exports have been considered traditionally as a first step to entering such markets, serving as a platform for future international expansion (Lu and Beamish 2001), being almost a passive form of internationalisation. However, international commercial competence is an SME resource that generates higher performance. Results suggest that international orientation, international marketing skills, international innovation and the orientation of the international market are significant, fundamental dimensions of SMEs' successful international performance (Knight and Kim 2009). Depending on international networks facilitates early internationalisation, and the relationship depends on the emphasis SMEs place on the area of technological innovation and the perceived hostility of the environment (Musteen et al. 2014).

In SMEs' international development, network relations can provide connections and facilitate entry to markets that are geographically and psychologically closed (Ojala 2009). That network cooperation can impose the adoption of an effective strategy to overcome the limitations SMEs face with regard to resources and capacities, when expanding into international markets (Lu and Beamish 2001), the reason for internationalisation being positively associated with the degree of risk and varying according to the sector of activity (Manolova et al. 2010). It is important to point out the main motivations for SMEs' internationalisation, these being increased sales, larger markets (Vide et al. 2010), increased profits, small size of the domestic market (Sass 2012), strengthened competitiveness (Hauptman et al. 2011) and exploiting opportunities in the destination market (Svetličič et al. 2007). So market opportunities emerge as the main reason for SMEs embarking on international journeys (Colapinto et al. 2015).

## ***2.2 Role of the Entrepreneurial CEO in SMEs' Internationalisation Process***

It is the CEO who carries out entrepreneurial actions, for example, entering international markets. According to Schumpeter (1911, 1942), their special characteristics are fundamental for SMEs, as they influence corporate orientation, both through their personality traits and their motivational and personal characteristics. The CEO as a leader has various paths of business orientation based on a social and organisational context (Del Giudice et al. 2011). CEOs are also sources of knowledge at various levels, such as in management, internationalisation, industry and linguistic culture (March 1991). This makes them entrepreneurs and major holders of knowledge in SMEs. This previously acquired knowledge can reduce the psychological distance from other markets and as such facilitates their firms'

internationalisation. Therefore, internationalisation strategies are developed according to the rationality of the choices made by entrepreneurial CEOs based on their knowledge (Pla-Barber and Escriba-Esteve 2006).

CEOs are successful when they manage to make decisions involving a calculated risk, establish realistic goals and are strongly committed to producing new products and expanding to international markets (Ngoma et al. 2012). Although attracted by risk, entrepreneurial CEOs are also able to manipulate, measure and deal with this (Hron 2006). Connected to their knowledge is the importance of their international orientation. However, recognising that opportunity may not be enough, as what really counts is entrepreneurs being motivated to exploit (Dubravská et al. 2015). CEOs who have lived abroad will probably be more inclined than others to export (Zucchella et al. 2007), also revealing a global mentality, which makes them pro-active, always trying to identify and exploit international business opportunities. They are therefore able to create innovative products (Demel and Potužáková 2012) that can be transformed into competitive advantages for their companies (Suarez-Ortega and Alamo-Vera 2005).

The CEO's personality and their need for self-fulfilment lead them to take on business that grabs their attention, thereby dealing pro-actively with the associated risks (Hutchinson et al. 2006). The CEO is a true public relations officer for the company, and therefore ends up being closer to markets and potential clients, and so their reputation has to be that of an honest, credible individual, inasmuch as the entrepreneur is also the reflection of the company. Therefore, it is the CEO's image that passes to the outside (Belak and Duh 2012). The knowledge that through absorptive capacity will become learning is based on the wisdom the entrepreneurial CEO has acquired internationally and also on the contact networks formed (Mura and Rózsa 2013).

Due to the importance of the CEO in the SME, it is relevant to understand how, through their experience abroad, but also as people, managers and visionaries, they contribute to the company's development (Ruzzier et al. 2006).

It should be noted that these CEOs are driven by ambition, based on their previous experience, are highly educated and skilled in foreign languages. So there is a strong international orientation in terms of export capacity (Swoboda et al. 2011; Fernández-Mesa and Alegre 2015), representing a competitive advantage over rivals.

The strategy drawn up by the CEO is fundamental, inasmuch as it is their capacity to define and communicate the strategy to the whole company, allowing it to be better prepared and ready to accumulate knowledge in the external market (Ciszewska-Mlinarič, 2016).

### ***2.3 Different Approaches by the CEO to Internationalisation in the Wine-Producing Sector***

In competitive environments characterised by turbulence and uncertainty, SMEs give greater emphasis to the capacity to assimilate information and less to the capacity to acquire new, additional information from the surrounding environment (Onetti et al. 2012). This statement shows that SMEs have limited resources and a limited degree of specialisation in acquiring and processing information, this being an inhibiting factor (Wiklund and Delmar, 2003) which for many years has affected and concerned CEOs when adopting the strategy of internationalising their companies (Goel and Yang 2015a). Firms operating in some sectors do not have the skill or knowledge to adopt modern management techniques or new technology (Jones and Macpherson 2006). Most of those SMEs do not carry out strategic planning, which leads to serious problems over the years (Sorooshian 2017). Nevertheless, SMEs' increased international activity is notable, despite these companies having fewer financial resources than large firms (Knight and Kim 2009).

The main aim is to sell in foreign markets, and so internationalisation becomes a crucial factor to maintain their performance and survive (Golovko and Valentini 2008), just as the internationalisation strategy processes created by the CEO, which vary from one firm to another (Susan Freeman et al. 2014). It is of note, however, that internationalisation becomes faster and more positive when associated with a specialised position (Gassmann and Keupp 2007).

As SMEs are characterised by having limited resources, CEOs are constantly involved in decision-making processes about their allocation (Kraus et al. 2017), as well as in collaboration activities between two or more firms aiming to form and maintain a cooperative relationship through joining complementary capacities based on essential competences and various activities (Shin et al. 2012). In so doing, they guard against their firms making mistakes and share the risk in unknown foreign markets (Lu and Beamish 2001). Management teams with great international experience are also more likely to develop relationships with strategic foreign partners, and so they take less time to obtain external sales after setting out, and that behaviour influences a greater degree of internationalisation (Reuber and Fischer 1997). Among the stimulants of early internationalisation, the CEO's previous experience is fundamental, as well as their international experience (Zucchella et al. 2007). The role played by CEOs originates in both their valuable resources and their know-how, and also in their intelligence as a producer (Alonso 2015). In turn, a business person's human capital and a company's internal resources can influence the competitive strategies followed by firms as well as their performance (Westhead et al. 2001). SME CEOs weigh up international expansion and many decide to resort to a strategic partnership with another company already present in a foreign market, with this being a more attractive alternative to entering alone (Kennedy and Keeney 2009).

CEOs use cooperation networks in order to control processes that improve their SMEs' performance (Nakos and Brouthers 2008), whenever this type of cooperation



is in line with the firm's capacities. This leads to the internationalization process and the capacity to raise the firm's human capital influencing the SME's international success (Javalgi and Todd 2011).

In certain circumstances, firms can enter international markets through an agent, a route that helps them to build new relationships and trust in the foreign capital of the partner network (Goel and Yang 2015b). The markets of developing economies are firms' preferred investment destinations, above all due the advantages they provide, such as access to potential markets, the predominant low-cost logic, human capital supply and the stock of natural resources (Frost 2001). Competitiveness emerges as a capacity incorporated in a network, and coordination among firms represents a strategic lever to achieve and maintain a sustainable competitive advantage (Lipparini and Sobrero 1994).

#### ***2.4 The CEO's Orientation and Entrepreneurial Competences***

According to Mitchelmore and Rowley (2010), the concept of the CEO's orientations and competences has many facets and applications. In this connection, Cheng et al. (2003) argue that the concept of competences is taken to be a description of something a person works on in a given area, being a description of an action, behaviour or result that the person should be able to demonstrate.

For Hayton and Kelley (2006), orientation and competences are a set of characteristics that can create a combination of knowledge, capacities and personality traits. For these authors, competences involve the knowledge necessary to achieve a certain result, the capacities to implement that knowledge, the personality traits necessary to motivate the implementation of knowledge and the capacities to reach a desired result.

In the same line, Zampier and Takahashi (2011) indicate that orientations and competences are understood as aptitudes held by an individual, which when used in specific actions allow the fulfilment of previously defined objectives.

In turn, Pagnoncelli et al. (2014) propose that the study of orientation and competences relates to the need for CEOs to reconcile individual competences with organisational competences, with entrepreneurial competences being based on the interaction between individual and organisational competences. For Snell and Lau (1994), the joining of competences with actions originated the concept of entrepreneurial competence, which is defined as being the body of knowledge or aptitudes, personal qualities or characteristics, attitudes and motivations. In the study by Mitchelmore and Rowley (2010), entrepreneurial orientations and competences are identified as a specific group of competences relevant for carrying out successful entrepreneurship. Man et al. (2002) define entrepreneurial orientation and competences as the entrepreneur's overall ability to perform a work role successfully and classify entrepreneurial competences in six groups, namely, (i) competences of

**Table 1** Definition of groups of entrepreneurial orientations and competences

Entrepreneurial orientations and competences	Definition
1. Competences of opportunity	Ability to recognize the development of market opportunities
2. Competences of relationship	Relate the interactions between individuals, for example, referring to building a context of cooperation and trust through contacts, links, persuasive ability and communication
3. Conceptual competences	Related to different conceptual aspects considered relevant in the entrepreneur’s behaviour, for example, risk and innovation
4. Administrative competences	Related to the organisation of different internal and external human resources, physical, financial and technological resources including team-building activities and collaborator training
5. Strategic competences	Related to assessment and implementation of the firm’s strategies
6. Commitment competences	Allow the entrepreneur to take on leadership in the firm

Source: Own elaboration, based on Man et al. (2002)

**Table 2** Entrepreneurial competences: correspondence between opportunity and strategic competences

Opportunity competences		Strategic competences	
Man et al. (2002)	Mitchelmore and Rowley (2010)	Man et al. (2002)	Mitchelmore and Rowley (2010)
Recognition of forms of developing market opportunities	Recognition and visualisation of opportunities	Assessment and implementation of the firm’s strategies	Formulation of strategies to take advantage of the opportunity

Source: Own elaboration

opportunity, (ii) competences of relationship, (iii) conceptual competences, (iv) administrative competences, (v) strategic competences and (vi) competences of commitment.

Based on the perspective of Man et al. (2002), Table 1 presents the definition of the six groups of the CEO’s entrepreneurial orientations and competences.

Mitchelmore and Rowley (2010) present six entrepreneurial competences: (i) identification and definition of a viable market niche; (ii) development of products and services appropriate to the firms that choose a market niche/product innovation; (iii) creation of ideas; (iv) monitoring of environments (inside and outside the firm); (v) recognition and visualisation of opportunities and (vi) formulating strategies to exploit the opportunity.

Promoting a convergence analysis between the perspectives of Man et al. (2002) and Mitchelmore and Rowley (2010), regarding entrepreneurial orientations and competences, for some competences a correspondence is found to exist (see Table 2), in terms of opportunity and strategic competences.

According to Pagnoncelli et al. (2014), competences can be innate and/or the result of applying knowledge and attitudes acquired through a learning process. For Leitão and Franco (2010) and Rodrigues (2016), entrepreneurial learning is related

to personal characteristics (e.g. motivation) and visible competences (i.e. aptitudes and knowledge that can be improved over time). In turn, Man (2006) proposes that entrepreneurial learning can derive from experience, cognition and networking, i.e. entrepreneurial learning is a process in which the concepts derive from experience and can be modified through the individual's reflection; cognition indicates that entrepreneurial learning is a process in which knowledge is acquired, stored and used over time; networking focuses on networks and on the relations individuals establish with their stakeholders, i.e. collaborators, partners, clients, suppliers, investors, etc.

That opportunity orientation combined with the CEO's entrepreneurial competences can even be moderated by the benefits and obstacles to internationalization, which in turn can interact with the strategic decision to enter new markets.

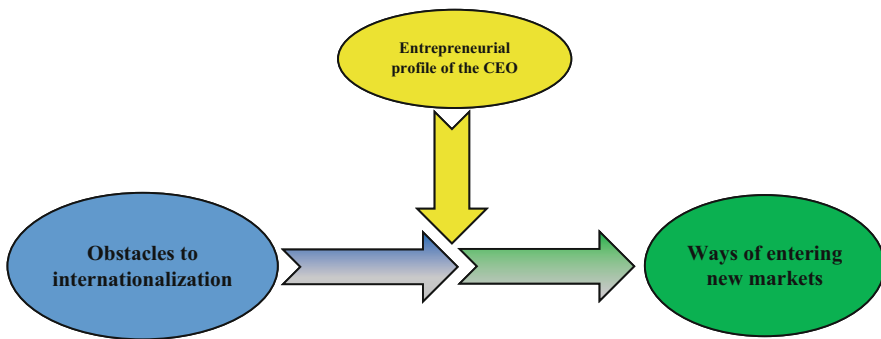
## 2.5 Conceptual Model of Analysis

With application to the wine-producing sector, the intention is to explore the role played by the entrepreneurial profile of the CEO in removing the major obstacles faced by SMEs throughout the internationalization process and in the choice of forms of entry to new international markets. Based on the literature review presented above, a new conceptual model of analysis is presented in Fig. 1.

## 3 Methodology

### 3.1 Type of Study and Case Selection

This study adopts a qualitative approach, giving the researcher greater adaptability in the demanding data collection process, where ideas can be followed up, answers can



**Fig. 1** Model of analysis for the study of entrepreneurial CEOs in the wine-producing sector. Source: Own elaboration

be examined in greater depth and reasons and feelings can be explored more (Cheuk 2010).

The greatest criticisms of the qualitative approach based on case studies concern problems of ‘validity’ and ‘trustworthiness/reliability’ of the process used (Dubois and Gibbert 2010). It is therefore important to identify and analyse the main recommendations made, incorporating them in the design of the methodological process of this research. A single case was examined (Yin 2014), at the regional level, studying the CEO profile and the survival of internationalised firms in the wine-producing sector in the Portuguese region of Ribatejo. The case was selected for the following reasons: (1) the entrepreneurial profile of CEOs in wine-production is little explored in the literature and (2) the existence of a traditional agricultural product of recognised quality in the region able to sustain the internationalisation process of micro-, small- and medium-sized business units.

### 3.2 Data Collection and Analysis

According to the aim of this study, in-depth interviews were held with wine-producing CEOs. Interviews can gather more complete and spontaneous answers through the interaction between the interviewer and the interviewee, avoiding misinterpretation of the questions by the interviewee (Minichiello et al. 2008).

The entrepreneurial profile of the CEOs interviewed was analysed (see Table 1), identifying their role in removing the various obstacles faced in internationalising their firms and in choosing ways to enter new markets (cf. Table 2), in order to improve exploitation of the business opportunity and in turn, company performance (Schott and Jensen 2016). Given the importance of following a qualitative approach, a sector that is little studied in the literature on international entrepreneurship, i.e. wine production, was analysed, and a matrix of competitive advantages was formed (see Table 3), in order to show, in comparative terms, the positioning of both companies with respect to internationalisation. The data collected during the interviews were subject to content analysis (Weber 1990), so as to define and analyse different categories of information. Following the procedure of Franco and Haase

**Table 3** Interviewee profiles

Designation	Order of interview	Gender	Age	Academic qualifications	Position held	Years in wine production
José Lobo de Vasconcelos Quinta Casal Branco	CEO A	Male	71 years	Degree in Business Management	CEO	44 years
Alexandre Manuel Gaspar Quinta do Arrobe	CEO B	Male	44 years	Degree in Business Management	CEO	13 years

Source: Own elaboration

(2015), information segments were delimited and the information considered pertinent coded with a word or short phrase, and finally, the codes obtained throughout the interviews were summarised and compared.

Nowadays, agricultural CEO networks play a fundamental role in rural tourism, since this is expressed through visits to farms, tasting of produce and everything else directly connected to rural areas' resources (Knickel et al. 2009). Food plays a crucial role in affirming the distinctive character of a place and its endogenous production, as it gives tourists a rich and authentic experience of the local area (Sidali et al. 2015). Although collaboration between the agricultural and tourism sectors is challenging, networks are fundamental to develop both of them, and so each should strive to find common ground so as to achieve mutual benefits (Low et al. 2016).

## 4 Case Study

### 4.1 Study Context

The history of wine production in the Tagus region (see Fig. 2), especially in Ribatejo (see Fig. 3) is lost in time, but the height of the wine commerce was reached, above all in the thirteenth century. Nowadays, wine production has an increasingly dominant role in the region of Ribatejo, Portugal, due to the long-recognised quality of the wine and the excellent conditions for the activity. The region has unique natural conditions for wine-production activities, with a temperate South-Mediterranean climate, influenced by the River Tagus which flows through the whole region, and the three distinct areas for wine-production are known as 'Campo', 'Bairro' and 'Charneca'. Campo has extensive plains, next to the River Tagus, also known as the Lezíri, and is primarily the area of white wines where the varieties of Casal Branco and Quinta da Alorna predominate. Bairro, situated between the Vale of Tagus and Montejunto has a clay-type soil. Charneca, situated to the south of Campo, on the left bank of the River Tagus, has sandy, fertile soil, where the wines of Quinta do Arrobe stand out, both white and red.

### 4.2 Selection of Case Studies

Case selection was the result of research in various sources. *Quinta Casal Branco* was chosen due to its importance in the sector and in the Ribatejo region, since this is the largest exporter of national wine, having existed for decades and being recognised as a brand established both nationally and internationally. *Quinta do Arrobe* is a more recent project and is beginning to enter a more consolidated internationalisation process, and from the research made, sales to foreign markets as yet represent a small part of the business. Evidence of the entrepreneurial profile

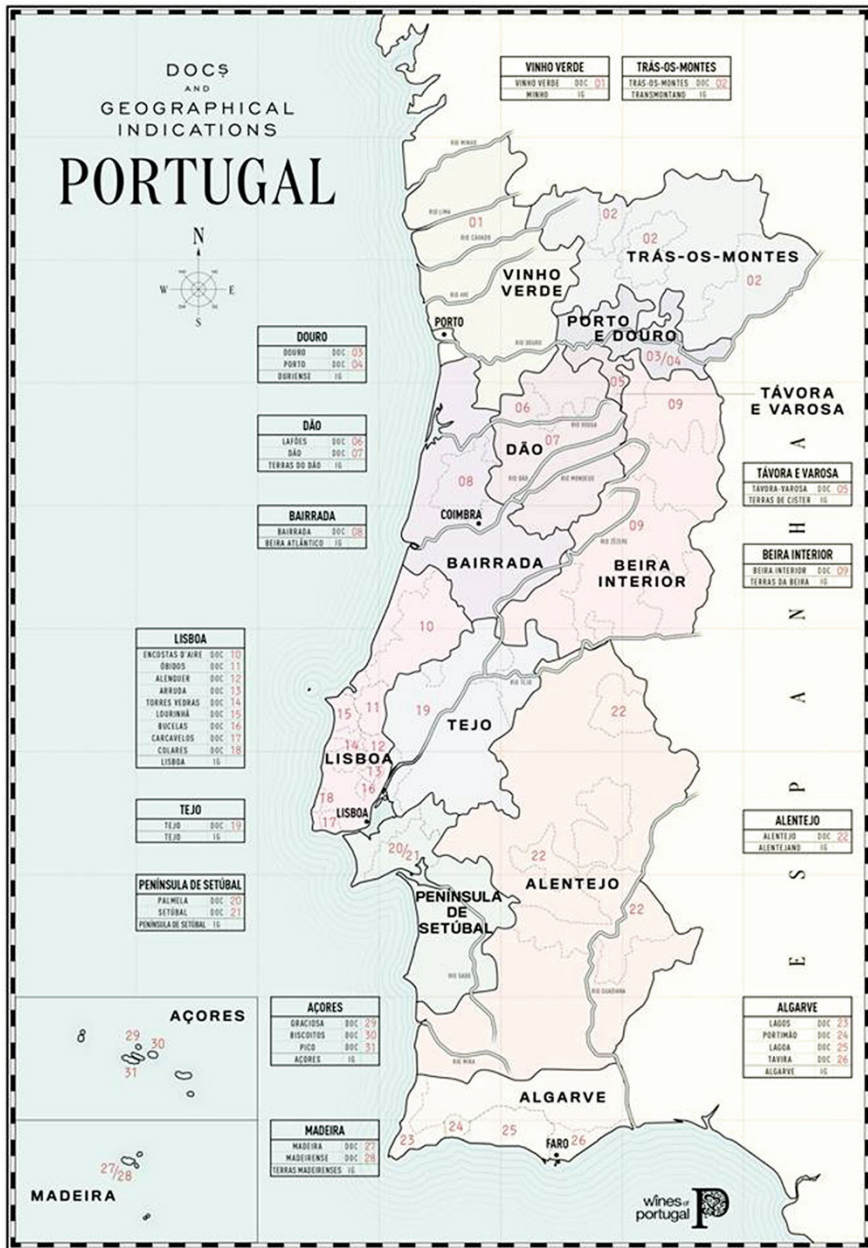


Fig. 2 Wines of Portugal. Source: Wines of Portugal



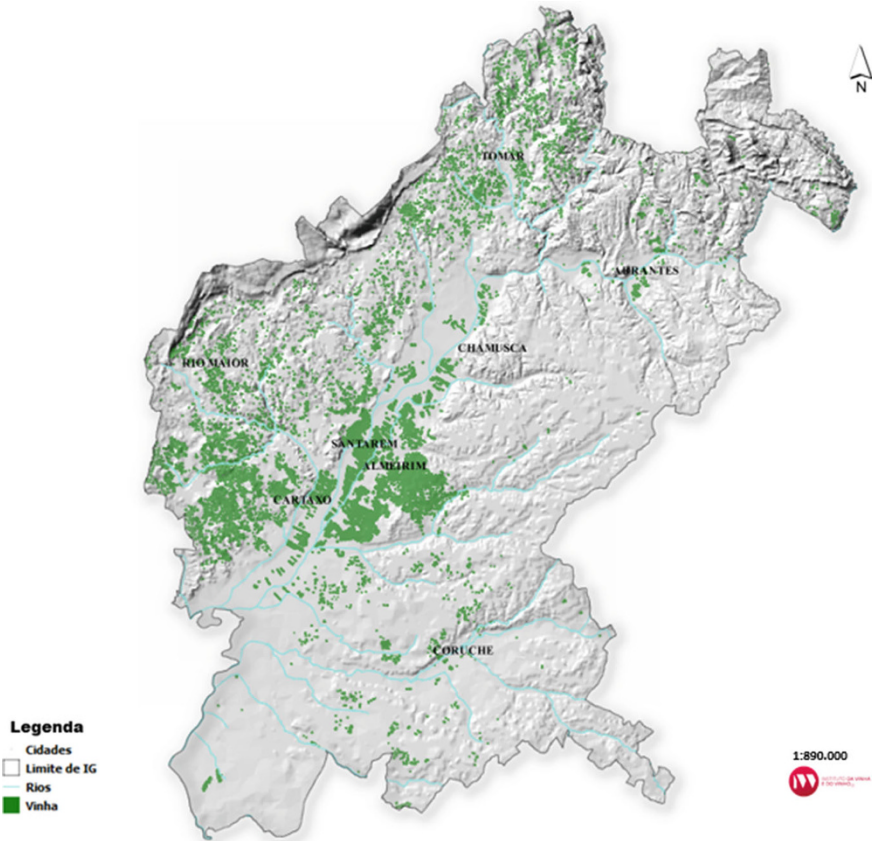


Fig. 3 Map of the Ribatejo region. Source: Own elaboration

of the CEO of each firm is presented, together with the obstacles to internationalisation and entry to new markets. The information considered pertinent for the study is coded with a short, explanatory phrase, and the two CEOs' answers are summarised and compared according to the analysis model (see Table 4). The results of the case study of the companies' CEOs are described, namely, the primary data obtained from the interviews leading to the formation of the matrix of competitive advantages where both firms are situated regarding their stage of internationalisation (see Table 5).

Considering the perspective of Porter (1985), competitive advantage derives from the value the company creates for its customers, and formulating a competitive strategy is essential for wine-producing firms, so that they can respond better to unsatisfied needs in all market segments, allowing those firms to create a unique position which is valuable and difficult to imitate.

The strategy of differentiation gives the CEOs of the estates studied a competitive advantage by providing wine of quality, which is shown to have the quality

**Table 4** Approaches to the CEOs according to the proposed analysis model

Dimensions of analysis	Axes of analysis	CEO A	CEO B	Comparative analysis
Geography and longevity of company history	Location and age of the company	Located in the district of Almeirim (Ribatejo region) and has existed for over 200 years	Located in Casével (Ribatejo region) and has operated for 13 years	Company A is more than 200 years old, while Company B has only existed for 13 years
Opening up to international business	Percentage of sales to international markets	91% of production is absorbed by international markets	35% of production is absorbed by international markets	Company A depends greatly on international markets
Entrepreneurial profile of the CEO	Where did the CEO begin the internationalisation process?	The process began in the UK, when the CEO went to study in London and later in the USA, as the family went to live there. From then on, the family wines gained awards and were recognised worldwide	First in China, then new business emerged. The next importer was in Norway, following a tendering process, and later the linguistic ease and proximity of markets with Portuguese immigrants (France, Luxembourg and Germany) gained prominence	On his own initiative and running risks, CEO A began the internationalisation process. CEO B exploited the business opportunity arising through a customer contact and the opportunity appeared initially by chance
	Did the possibility of developing an approach to the markets arise via a partnership or from a decision taken by the company's CEO?	From a decision by the company's CEO, due to the low internal demand for our wine	On the CEO's initiative, in order to broaden horizons and try to increase the profitability of the firm's business	The CEOs were both pro-active in the face of the low demand and limited internal market. In this way, the CEOs tried to raise their results, concentrating their efforts on internationalisation
Obstacles in the internationalisation process	What are the biggest disadvantages your company faces in internationalisation projects?	The biggest disadvantage lies in the high customs tariffs set in certain countries and the counter-labelling containing all the information about the wine, with the specifications being different for each country	The greatest disadvantage originates in the lack of government help, which should be greater; another is a cultural and organisational problem, there is little joint working, there is no cooperative work, and costs are not shared	CEO A is concerned about the sector's problems, while CEO B is also concerned about organisational and cultural questions, highlighting the lack of a cooperation culture, i.e. cooperation and competition among competitors



<p>Ways of entering new markets</p>	<p>What projects did the CEO apply to, to stimulate the approach to the company's internationalisation?</p>	<p>They began 12 years ago under the former QREN – National Strategic Reference Framework. Now, Portugal 2020 is used, which pays 50% of travel and international fairs</p>	<p>Portugal 2020, but limited experience capital is underlined, with no feedback to report, given the recent nature of this experience</p>	<p>CEO A has great experience of applications, whereas CEO B began this process very recently.</p>
	<p>Does the CEO seek help from some external entity for knowledge and foreign market penetration? Were initiatives taken to stimulate the firm's approach to internationalisation?</p>	<p>Support came from Viniportugal and CVRTejo. From the beginning of this year, the company carries out competitive surveillance of markets to determine the strategic and emerging markets to concentrate on</p>	<p>Support originated in AICEP, Viniportugal and CVRTejo, as they provide information about countries to export to, as well as access to lists of importers and lists of retailers, also giving information about the wine consumption per inhabitant</p>	<p>Both CEOs resort practically to the same entities and seek the same type of information</p>

Source: Own elaboration, from the interviews held

**Table 5** Matrix of competitive advantages

Critical success factors (CSF)	CEO of Quinta Casal Branco	CEO of Quinta do Arrobe
Commercialised brands and longevity in the international market	Capoeira, Falcoaria, Lobo and Falcão, Monge, Quartilho, Quinta do Casal Branco and Terra de Lobos. Present for 30 years	Sensato, Oculto, Mensagem, Quinto Elemento. Present for 11 years
Destination markets	Present in diverse markets, highlighting the UK, Belgium, Poland, the USA, China, India, Russia, Germany, Switzerland and Brazil	Present in very competitive markets, highlighted among them Brazil, China and the USA
Image	The company aims to satisfy what China seeks, corresponding to the desires of Chinese customers, in terms of colour, symbolism and animals on the labelling	The company aims to satisfy the Chinese market in terms of colour, symbolism and animals on the labelling

Source: Own elaboration

consumers desire, but at the same time revealing different characteristics from the wine supplied by competitors. This strategy allows the two organisations studied to make efforts directed to a given segment and/or geographical market, which shows adoption of a generic strategy of focusing on differentiation, arising from previous identification of a relevant, duly segmented market. This focused strategy implemented by both CEOs facilitates and stimulates customer loyalty, attempting to neutralise the competition and delaying the entry of new competitors.

### 4.3 Results of the Research

Through the interviewees' statements, it was possible to confirm that local cooperation in the Portuguese region of Ribatejo is founded on friendships or long-term contacts, shown in symbolic activities linked to the expression of local identity and solidarity. The main factor joining wine producers is the uniqueness of the product itself.

Based on the model of analysis proposed in this study, and referring to the Portuguese region of Ribatejo, we analyse the entrepreneurial profile of the CEOs of two internationalised companies, in different stages of operations, in relation to the obstacles they face throughout the internationalisation process, as well as forms of entry to new international markets, to ensure new growth dynamics and organisational sustainability based on competitive advantages anchored on the complex process of internationalisation.

### 4.3.1 Entrepreneurial Profile of the CEO

The company of Quinta Casal Branco-Sociedade de Vinhos, S.A., located at the heart of the Portuguese region of Ribatejo and for various generations linked to the Cruz Sobral family, has over 1100 hectares of land and an agricultural and wine-producing tradition going back 200 years. Quinta do Casal Branco was a pioneer of technological innovation in Ribatejo, as it was the first steam-powered winery in the region.

The CEO is someone with great experience in the sector, with good knowledge of international markets where his company has operated for 30 years and is currently present in 28 countries.

On the other hand, the firm of Quinta do Arrobe, situated in Casével, Santarém, is a family business, led by Maria and Alexandre Gaspar, with a strong exporting vocation and orientation in wine production. The family's connection with wine production began in 1882, resulting in a tradition over various generations. Its CEO is young, with 7 years of international experience and little experience of community support.

The CEOs interviewed have great know-how in the sector in which they operate, try to promote the image of Portugal as a producer of unique wines and have been working to this end. They are the ones indicating the route to markets where there is a possibility to grow, and the investment decision is always theirs.

### 4.3.2 Obstacles to the Internationalisation Process

The obstacles encountered throughout the internationalisation process vary from one market to another, but some common problems are identified. In the Far East (especially in the Chinese market), little knowledge about wine hinders the entry of Portuguese wines, as mentioned by CEO B. In European countries, the major obstacles are cultural, leading consumers to prefer wine produced in their own country. In the USA, the main obstacle is the way the market is segmented in terms of legislation, as each state has its own regulations, which makes the market extremely complex and greatly hinders the exporting process, as underlined by both CEOs interviewed. Both of them identified yet another obstacle to internationalisation of their wines, which is the high custom tariffs they have to pay, mainly in South America, and the difficulty of finding trustworthy strategic partners in those countries.

### 4.3.3 Ways to Enter New Markets

At certain times, the companies also approach international markets through an agent, as happened with Quinta do Casal Branco, helping to form new relationships and trust in the foreign capital of the partner network (Goel and Yang 2015b).

Developing economies are the preferred investment destinations of these companies, above all due to the advantages they provide, such as access to potential markets, low-cost orientation, the availability of human capital and the stock of natural resources (Frost 2001). The way of entering international markets, for both Quinta do Casal Branco and Quinta do Arrobe, was mostly through direct exports, using importers and distributors in the destination market, which in some cases was undertaken by people who were in fact born in Portugal (i.e. in the country of origin), but in most cases that link with Portugal did not exist. About 90% of Quinta do Casal Branco's sales are abroad, testifying the importance of international markets for the sustainability and profitability of the company's business. With a presence in 28 countries, this estate's main international markets are South Africa, Germany, Angola, Belgium, Brazil, Canada, China, Denmark, Slovakia, Finland, the Philippines, the Netherlands, Hong Kong, Japan, Venezuela, Macau, Malaysia, Mozambique, Poland, Russia, Singapore, Sweden and Switzerland. The main clients of this estate, when beginning to sell abroad, were limited to the so-called diaspora market, but now, with the growth of the business and the prestige attributed to its main wine, purchases are made by natives of the different countries where the company is present.

Quinta do Arrobe's form of entry was initially through *Trader* and the distributor networks in the destination market, which served to spread the word in those markets. Currently, the international market quota is 30% in both Brazil and Germany and around 14% in China. This means that these three markets together absorb around 74% of exports, corresponding to 40% of production.

Quinta Casal Branco began foreign trading in the 1920s, when it embarked on the process of selling its wine in international markets. That internationalisation began in countries where the Portuguese community was concentrated such as Brazil, the former overseas colonies in Africa (Angola, Mozambique and Cape Verde) and in Europe, for example, England and France. These were always the main destinations, due to the proximity of the culture and the Portuguese language.

Quinta do Arrobe only began its internationalisation process in 2007 and currently has a presence in 12 markets, with the premium and superpremium ranges, which are exported to countries such as Germany, Brazil, Luxembourg, the Czech Republic, Norway and China.

Quinta do Casal Branco began selling in international markets by chance, as it was the client who appreciated the product and intended to sell it in China. Today, internationalisation serves as an anchor to dispose of the product more easily and obtain greater income. As for Quinta do Arrobe, it wanted to internationalise to gain international projection, and this was a clear objective for the family, in order to expand the business.

The CEOs stated that in the markets considered strategic for internationalisation, they have annual promotion plans covering the following typologies of action: fairs, annual tasting, participation in festivals, promotion actions at the point of sale and public relations activities. In the domestic market, the main efforts include tasting rooms located in Santarém and Cartaxo, which are visited mainly by foreigners who can make contact with the brand and also buy wine.

#### 4.3.4 Comparative Evolution of the Competitive Advantage Matrix

Despite the excellent results in the sector, there must be constant efforts to modernise, if the internationalised wine-producing units studied want to continue to increase their market quota in the various countries and give increasing importance to continued international promotion of their wine.

Both CEOs aim for their companies to enter new markets via their internationalisation strategy and support from some national bodies, which through their consultants allow entry to unknown markets. These organize actions to position the brand and educate professionals, with a view to increasing the market's perception of the quality of Portuguese wines, as happens currently with the Asian market, which is an excellent example, thereby creating competitive advantages.

Competitiveness emerges as a capacity incorporated in a network and coordination among companies represents a strategic lever to attain and maintain a sustainable competitive advantage (Lipparini and Sobrero 1994). Quinta Casal Branco has a greater diversity of brands and has operated in international markets for longer, being present in 28 countries. Quinta do Arrobe is present in only 12 international markets, but both companies adapt to what the client requires by listening to their demands, as in the case of the Chinese market.

## 5 Conclusions and Implications

Considering the absence of qualitative studies about the profile of wine-producing CEOs, our study intended to fill that gap through a case study about the survival of internationalised wine producers in the Portuguese region of Ribatejo. These CEOs have contributed to sustainable development of the region studied, as besides producing economic benefits; they contribute to conserving the landscape and biodiversity, as well as creating employment and preserving traditions. Both CEOs demonstrated their knowledge about the wine tradition and the specificities of the product. The spatial relationship between the farms is the main factor determining cooperation in the area of production, not only between small producers (Colombo and Perujo-Villanueva 2017) but also between larger ones where certain conditions are found, such as the shortage of human and financial resources and use of the same production system. Cooperation between the CEOs is also found in the share of labour and more expensive agricultural equipment. The Portuguese wine-producing sector has improved considerably in the Ribatejo region, mainly due to the arrival of a new generation of entrepreneurial CEOs who have focused on internationalisation, and by incorporating a new generation of oenologists with better training and knowledge of international tastes. This has also come about by implementing a new management strategy, which has led to greater promotion of Ribatejo wines abroad, through the presence in international fairs in the sector and by participating in competitions with other foreign producers. This has resulted in numerous awards

and consequent promotion in the international market. Despite these excellent results for the sector, there must be continued efforts to modernise, if the intention is to increase market quotas in various importing countries and to give added importance to concerted attempts to publicise Ribatejo wines internationally, but with greater emphasis on strategic policies of business cooperation.

Companies' structure is based on their CEOs, and these are the people who define the firm's position, based mainly on their intuition, and undertake entrepreneurial actions, with internationalisation depending on their success or failure.

According to the study by Mainela et al. (2018), the focus has to be on activity as producing international opportunities. The results of this qualitative study applied to entrepreneurial CEOs reveal that these are individuals with a global outlook, who are always alert and ready to seek international opportunities. In this context, it is highlighted that this qualitative research opens the path for deepening study of the importance of the intuition and experience capital of the entrepreneurial CEO, as intrinsic determinants of the internationalisation process they embark on for wine-producing companies that adopt alternative routes to survival and growth in international markets. The study has some limitations. Firstly, it is a sample of convenience and focuses on only one Portuguese region. Secondly, adoption of the case study methodology prevents the conclusions drawn from being generalised to all entrepreneurial CEOs in the wine-producing sector.

Future research could include other regions, to allow comparison with the results obtained here. In larger regions, there will probably be more CEOs involved, as well as professionalised management structures in the internationalisation of this sector.

It will be pertinent in the future to make more exhaustive studies of the paths presented, so that wine, as a product of culture and emotions, can continue to expand and optimise its production and commercialisation, and can include a greater focus on marketing and advertising campaigns worldwide and the organisation of more solid cooperative networks of wine-producing entrepreneurs. This should lead to greater production and exports, through co-creation and CEOs sharing their knowledge, to promote effective strategic cooperation, with a view to maximising sustainable profit and extending markets through recourse to financed projects and with larger budgets. The ultimate aim would be to raise Ribatejo's competitiveness to the high level of other regions in Portugal, such as the Douro and Alentejo, which are guided by competitive excellence, oriented towards truly global markets including culture, tourism and service packages linked to wine.

## References

- Alonso, A. D. (2015). Wine as a unique and valuable resource: An exploratory study of wine consumers on La Palma Island. *British Food Journal*, 117(11), 2757–2776. <https://doi.org/10.1108/BFJ-03-2015-0085>.
- Belak, J., & Duh, M. (2012). Integral management: Key success factors in the MER model. *Acta Polytechnica Hungarica*, 9(3), 5–26.

- Brouthers, K. D., Nakos, G., & Dimitratos, P. (2015). SME entrepreneurial orientation, international performance, and the moderating role of strategic alliances. *Entrepreneurship: Theory and Practice*, 39(5), 1161–1187. <https://doi.org/10.1111/etap.12101>.
- Cheng, M.-I., Dainty, A., & Moore, D. (2003). The differing faces of managerial competency in Britain and America. *Journal of Management Development*, 22(6), 527–537.
- Cheuk, S. (2010). An establishment of the role of private and public sector interests in the context of tourism transport planning and development: The case of Malaysia. *International Business & Economics Research Journal*, 9(2), 59–68. <https://doi.org/10.19030/iber.v9i2.522>.
- Child, J., Hsieh, L., Elbanna, S., Karmowska, J., Marinova, S., Puthusserry, P., Tsai, T., Narooz, R., & Zhang, Y. (2017). SME international business models: The role of context and experience. *Journal of World Business*, 52(5), 664–679.
- Ciszewska-Mlinarič, M. (2016). Foreign market knowledge and SMEs' international performance: Moderating effects of strategic intent and time-to-internationalization. *Entrepreneurial Business and Economics Review*, 4(4), 51–66. <https://doi.org/10.15678/EBER.2016.040404>.
- Colapinto, C., Gavinelli, L., Zenga, M., & Di Gregorio, A. (2015). Different approaches to the pursuit of internationalization by Italian SMEs. *Journal of Research in Marketing and Entrepreneurship*, 17(2), 229–248.
- Colombo, S., & Perujo-Villanueva, M. (2017). Analysis of the spatial relationship between small olive farms to increase their competitiveness through cooperation. *Land Use Policy*, 63, 226–235. <https://doi.org/10.1016/j.landusepol.2017.01.032>.
- Del Giudice, M., Arslan, A., Scuotto, V., & Caputo, F. (2011). Influences of cognitive dimensions on the collaborative entry mode choice of small and medium-sized enterprises. *International Marketing Review*. <https://doi.org/10.1108/JHOM-09-2016-0165>.
- Demel, J., & Potužáková, Z. (2012). FDI and the Liberec region: the case of the Labour Market. *E&M Economics and Management Journal*, 4, 4–18.
- Dubois, A., & Gibbert, M. (2010). From complexity to transparency: Managing the interplay between theory, method and empirical phenomena in IMM case studies. *Industrial Marketing Management*, 39(1), 129–136.
- Dubravská, M., Mura, L., Kotulič, R., & Novotný, J. (2015). Internationalization of entrepreneurship - Motivating factors: Case study of the Slovak Republic. *Acta Polytechnica Hungarica*, 12, 121–133. <https://doi.org/10.12700/APH.12.5.2015.5.7>.
- Felício, J. A., Meidutė, I., & Kyvik, Ø. (2016). Global mindset, cultural context, and the internationalization of SMEs. *Journal of Business Research*, 69(11), 4924–4932.
- Fernández-Mesa, A., & Alegre, J. (2015). Entrepreneurial orientation and export intensity: Examining the interplay of organizational learning and innovation. *International Business Review*, 24(1), 148–156. <https://doi.org/10.1016/j.ibusrev.2014.07.004>.
- Franco, M., & Haase, H. (2015). University-industry cooperation: Researchers' motivations and interaction channels. *Journal of Engineering and Technology Management (JET-M)*, 36, 41–51. <https://doi.org/10.1016/j.jengtecman.2015.05.002>.
- Freeman, S., Deligonul, S., & Cavusgil, T. (2014). Strategic re-structuring by born-globals using outward and inward-oriented activity. *International Marketing Review*. <https://doi.org/10.1108/09596110710757534>.
- Frost, T. S. (2001). The geographic sources of foreign subsidiaries' innovations. *Strategic Management Journal*, 22(2), 101–123.
- Gassmann, O., & Keupp, M. M. (2007). The competitive advantage of early and rapidly internationalising SMEs in the biotechnology industry: A knowledge-based view. *Journal of World Business*, 42(3), 350–366.
- Gils, V., & Zwart. (2015). Alliance formation motives in SMEs. *International Small Business Journal*, 27, 5–37.
- Goel, A., & Yang, N. (2015a). Different approaches to the pursuit of internationalization by Italian SMEs. *European Journal of Marketing*, 24(5), 41–49. <https://doi.org/10.1108/EL-01-2014-0022>.

- Goel, A., & Yang, N. (2015b). Internationalization and performance of Indian born globals. *European Journal of Marketing*, 24(5), 41–49. <https://doi.org/10.1108/EL-01-2014-0022>.
- Golovko, E., & Valentini, G. (2008). Exploring the complementarity between innovation and export for SMEs' growth. *Journal of International Business Studies*, 42. <https://doi.org/10.1057/jibs.2011.2>.
- Hauptman, L., Bobek, V., Cancar, V., Perko, I., & Vide, R. K. (2011). Policy support to the internationalization of small and medium-sized enterprises: Evidence from Slovenia. *Transformations in Business & Economics*, 10(3), 138–154.
- Hayton, J. C., & Kelley, D. J. (2006). A competency-based framework for promoting corporate entrepreneurship. *Human Resource Management*, 45(3), 407–427.
- Hron, J. (2006). Knowledge and strategic management. *Agricultural Economics – Czech*, 52(3), 101–106.
- Hutchinson, K., Quinn, B., & Alexander, N. (2006). The role of management characteristics in the internationalization of SMEs: Evidence of from the UK retail. *Journal of Small Business and Enterprise Development*, 13(4), 513–534.
- Javalgi, R. G., & Todd, P. R. (2011). Entrepreneurial orientation, management commitment, and human capital: The internationalization of SMEs in India. *Journal of Business Research*, 64(9), 1004–1010. <https://doi.org/10.1016/j.jbusres.2010.11.024>.
- Jones, O., & Macpherson, A. (2006). Inter-organizational learning and strategic renewal in SMEs. Extending the 4I Framework. *Long Range Planning*, 39(2), 155–175. <https://doi.org/10.1016/j.lrp.2005.02.012>.
- Kalinic, I., & Forza, C. (2012). Rapid internationalization of traditional SMEs: Between gradualist models and born globals. *International Business Review*, 21(4), 694–707.
- Kennedy, A., & Keeney, K. (2009). Strategic partnerships and the internationalisation process of software SMEs. *Service Business*, 3(3), 259–273. <https://doi.org/10.1007/s11628-008-0061-3>.
- Kim, Y., & Vonortas, N. S. (2014). Managing risk in the formative years: Evidence from young enterprises in Europe. *Technovation*, 34(8), 454–465. <https://doi.org/10.1016/j.technovation.2014.05.004>.
- Knickel, K., Brunori, G., Rand, S., & Proost, J. (2009). Towards a better conceptual framework for innovation processes in agriculture and rural development: From linear models to systemic approaches. *The Journal of Agricultural Education and Extension*, 15(2), 131–146. <https://doi.org/10.1080/13892240902909064>.
- Knight, G. A., & Kim, D. (2009). Venturing from emerging economies. *Journal of International Business Studies*, 40(2), 255–273. <https://doi.org/10.1057/palgrave.jibs.8400397>.
- Kraus, S., Mitter, C., Eggers, F., & Stieg, P. (2017). Drivers of internationalization success: A conjoint choice experiment on German SME managers. *Review of Managerial Science*, 11(3), 691–716. <https://doi.org/10.1007/s11846-016-0201-4>.
- Leitão, J., & Franco, M. (2010). On the evaluation of the performance of SMEs from a human and organisational capital perspective. *International Journal of Entrepreneurship and Small Business*, 10(1), 108–130.
- Lipparini, A., & Sobrero, M. (1994). The glue and the pieces: Entrepreneurship and innovation in small-firm networks. *Journal of Business Venturing*, 9(2), 125–140. [https://doi.org/10.1016/0883-9026\(94\)90005-1](https://doi.org/10.1016/0883-9026(94)90005-1).
- Low, M. P. (2016). Corporate social responsibility and the evolution of internal corporate social responsibility in 21st century. *Asian Journal of Social Sciences and Management Studies*, 3(1), 56–74.
- Lu, J. W., & Beamish, P. W. (2001). The internationalization and performance of SMEs. *Strategic Management Journal*, 22(6–7), 565–586. <https://doi.org/10.1002/smj.184>.
- Mainela, T., Puhakka, V., & Sipilä, S. (2018). International entrepreneurship beyond individuals and firms: On the systemic nature of international opportunities. *Journal of Business Venturing*, 33(4), 534–550. <https://doi.org/10.1016/j.jbusvent.2018.04.002>.



- Malo, S., & Norus, J. (2009). Growth dynamics of dedicated biotechnology firms in transition economies. Evidence from the Baltic countries and Poland. *Entrepreneurship and Regional Development*, 21(5–6), 481–502. <https://doi.org/10.1080/08985620802332749>.
- Man, T. W. Y. (2006). Exploring the behavioral patterns of entrepreneurial learning: A competency approach. *Education + Training*, 48(5), 309–321.
- Man, T., Lau, T., & Chan, K. F. (2002). The competitiveness of small and medium enterprises. A conceptualisation with focus on entrepreneurial competencies. *Journal of Business Venturing*, 17(2), 123–142.
- Manolova, T. S., Manev, I. M., & Gyoshev, B. S. (2010). In good company: The role of personal and inter-firm networks for new-venture internationalization in a transition economy. *Journal of World Business*, 45(3), 257–265. <https://doi.org/10.1016/j.jwb.2009.09.004>.
- March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2(1), 71–87.
- Minichiello, V., Aroni, R., & Hays, T. (2008). *In-depth interviewing* (3rd ed.). Melbourne: Pearson/Prentice-Hall.
- Mitchelmore, S., & Rowley, J. (2010). Entrepreneurial competencies: A literature review and development agenda. *International Journal of Entrepreneurial Behaviour and Research*, 16(2), 92–111. <https://doi.org/10.1108/13552551011026995>.
- Mura, L., & Rózsa, Z. (2013). The impact of networking on the innovation performance of SMEs. In *7th International Days of Statistics and Economics*, Prague, pp. 1036–1042.
- Musteen, M., Datta, D. K., & Francis, J. (2014). Early internationalization by firms in transition economies into developed markets: The role of international networks. *Global Strategy Journal*, 4(3), 221–237. <https://doi.org/10.1002/gsj.1077>.
- Nakos, G., & Brouthers, K. D. (2008). International alliance commitment and performance of small and medium-size enterprises: The mediating role of process control. *Journal of International Management*, 14(2), 124–137. <https://doi.org/10.1016/j.intman.2007.11.001>.
- Narula, R. (2004). R&D collaboration by SMEs: New opportunities and limitations in the face of globalisation. *Technovation*, 24(2), 153–161. [https://doi.org/10.1016/S0166-4972\(02\)00045-7](https://doi.org/10.1016/S0166-4972(02)00045-7).
- Ngoma, M., Abaho Ernest, S. N., & Graduate, K. C. (2012). Internationalisation of SMEs: does entrepreneurial orientation matter? *World Journal of Entrepreneurship, Management and Sustainable Development*. <https://doi.org/10.1108/WJEMSD-08-2016-0039>.
- Ojala, A. (2009). Internationalization of knowledge-intensive SMEs: The role of network relationships in the entry to a psychically distant market. *International Business Review*, 18(1), 50–59. <https://doi.org/10.1016/j.ibusrev.2008.10.002>.
- Onetti, A., Zucchella, A., Jones, M. V., & McDougall-Covin, P. P. (2012). Internationalization, innovation and entrepreneurship: Business models for new technology-based firms. *Journal of Management and Governance*, 16(3), 337–368. <https://doi.org/10.1007/s10997-010-9154-1>.
- Pagnoncelli, V., Zampier, M. A., & Stefano, S. R. (2014). Competências empreendedoras de proprietários franqueados de escolas de idiomas do interior do Paraná. *Revista de Empreendedorismo e Gestão de Pequenas Empresas*, 3(3), 129–160.
- Paul, J., Parthasarathy, S., & Gupta, P. (2017). Exporting challenges of SMEs: A review and future research agenda. *Journal of World Business*, 52(3), 327–342.
- Pla-Barber, J., & Escriba-Esteve, A. (2006). Accelerated internationalisation: Evidence from a late investor country. *International Marketing Review*, 23(3), 255–278.
- Porter, M. (1985). *Competitive advantage: Creating & sustaining superior performance*. New York, NY: The Free Press.
- Reuber, A., & Fischer, E. (1997). The influence of the management team's international experience on the internationalization behaviors of SMEs. *Journal of International Business Studies*, 28, 807–825. <https://doi.org/10.1057/palgrave.jibs.8490120>.
- Rodrigues, J. (2016). *Família empresária e competências empreendedoras*, Fórum Sociológico. Disponível em <http://sociologico.revues.org/1497>. <https://doi.org/10.4000/sociologico.1497>

- Roy, A., Sekhar, C., & Vyas, V. (2016). Barriers to internationalization: A study of small and medium enterprises in India. *Journal of International Entrepreneurship*, 14(4), 513–538. <https://doi.org/10.1007/s10843-016-0187-7>.
- Ruzzier, M. R., Hisrich, D., & Antoncic, B. (2006). SME internationalization research: Past, present and future. *Journal of Small Business Enterprise Development*, 13(4), 476–497.
- Sass, M. (2012). Internationalisation of innovative SMEs in the Hungarian medical precision instruments industry. *Post-Communist Economies*, 24(3), 365–382.
- Schott, T., & Jensen, K. W. (2016). Firms' innovation benefiting from networking and institutional support: A global analysis of national and firm effects. *Research Policy*, 45(6), 1233–1246. <https://doi.org/10.1016/j.respol.2016.03.006>.
- Schumpeter, J. A. (1911). *A Teoria do Desenvolvimento Economico*. São Paulo: Abril Cultural, 1982.
- Schumpeter, J. A. (1942). *Capitalismo, Socialismo e Democracia*. Rio de Janeiro: Zahar, 1984.
- Shin, J. K., Park, M. S., & Ingram, R. (2012). Market orientation and communication methods in international strategic alliances. *Journal of Business Research*, 65(11), 1606–1611. <https://doi.org/10.1016/j.jbusres.2011.02.046>.
- Katia Laura Sidali, Elisabeth Kastenholz & Rossella Bianchi (2015) Food tourism, niche markets and products in rural tourism: combining the intimacy model and the experience economy as a rural development strategy, *Journal of Sustainable Tourism*, 23:8-9, 1179-1197, DOI: 10.1080/09669582.2013.836210
- Snell, R., & Lau, A. (1994). Exploring local competences salient for expanding small business. *Journal of Management Development*, 13(4), 4–15.
- Sorooshian, S. (2017). Adaptation of a business performance measurement system for Malaysian smaller enterprises. *Quality - Access to Success*, 18(157), 124–131.
- Suarez-Ortega, S. S., & Alamo-Vera, F. (2005). SMEs' internationalization: Firms and managerial factors. *International Journal of Entrepreneurial Behaviour & Research*, 11(4), 258–279.
- Svetličič, M., Jaklič, A., & Burger, A. (2007). Internationalization of small and medium-size enterprises from selected Central European Economies. *Eastern European Economics*, 45(4), 36–65.
- Swoboda, B., Meierer, M., Foscht, T., & Morschett, D. (2011). International SME alliances: The impact of alliance building and configurational fit on success. *Long Range Planning*, 44(4), 271–288. <https://doi.org/10.1016/j.lrp.2011.04.002>.
- Tarek, B. H., Adel, G., & Sami, A. (2016). The relationship between “competitive intelligence” and the internationalization of North African SMEs. *Competition & Change*, 20(5), 326–336.
- Vide, R. K., Bobek, V., Cancer, V., Perko, I., & Hauptman, L. (2010). The efficiency of entrepreneurship policy support for the internationalisation of SMEs: The case of Slovenia. *European Journal of International Management*, 4(6), 644.
- Weber, R. P. (1990). *Basic content analysis* (2nd ed.). Beverly Hills, CA: Sage.
- Welch, L., & Luostarinen, R. (1988). Internationalization: Evolution of a concept. *Journal of General Management*, 14(2), 34–55.
- Westhead, P., Wright, M., & Ucbasaran, D. (2001). The internationalization of new and small firms: A resource-based view. *Journal of Business Venturing*, 16(4), 333–358. [https://doi.org/10.1016/S0883-9026\(99\)00063-4](https://doi.org/10.1016/S0883-9026(99)00063-4).
- Wiklund, J., & Delmar, F. (2003). Organizational absorptive capacity and responsiveness: An empirical investigation of growth-oriented SMEs. *Entrepreneurship: Theory and Practice*, 27(3), 247–270. <https://doi.org/10.1111/1540-8520.t01-1-00003>.
- Yin, R. (2014). *Case study research: Design and methods* (5th ed.). Los Angeles, London: Sage.
- Zampier, M. A., & Takahashi, A. R. W. (2011). Competências empreendedoras e processos de aprendizagem empreendedoras: modelo conceitual de pesquisa. *Cadernos EBAPE*, 9, 564–585. <https://doi.org/10.1590/S1679-39512011000600007>.
- Zucchella, A., Palamara, G., & Denicolai, S. (2007). The drivers of the early internationalization of the firm. *Journal of World Business*, 42(3), 268–280. <https://doi.org/10.1016/j.jwb.2007.04.008>.

# Socioemotional Wealth and Financial Performance and Their Impact on Innovation Initiatives in Mexican Family Businesses: A Case Study

Jorge A. Duran-Encalada and Jose A. Vazquez-Villalpando

**Abstract** This work contributes to understanding the connection between family firms' goals and interests with the resources and competences they use to carry out entrepreneurial actions connected mainly with innovation. To examine this issue, the authors conducted an explorative-descriptive case study that included two Mexican family firms. The results show that it is possible to find an alignment between financial performance and socioemotional wealth (SEW) and the different types of resources and competences that a family firm displays to reach them. Also, the firm's entrepreneurial orientation (EO) may serve to moderate this alignment.

**Keywords** Socioemotional wealth (SEW) · Entrepreneurship · Competences · Family firm · Mexico

## 1 Introduction

The purpose of this chapter is to acknowledge and understand the importance of financial performance and socioemotional wealth (SEW) objectives on actual entrepreneurial actions a family firm undertakes regarding specific resources and competences. From a theoretical standpoint, it will provide new knowledge about the alignment of specific types of resources and competences with either kind of objectives: financial or SEW. In this way, these findings will contribute to complement the resource-based view (RBV) that is one of the main foundations of family business research (Aldrich and Cliff 2003; Habbershon and Williams 1999; Haynes et al. 1999).

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This work assumes that the type of resources and competences that a family business uses for innovation, as an essential element of the entrepreneurial actions, is linked to the differential importance that family businesses allocate to financial performance vis-a-vis SEW objectives.

Extant literature has typically included the entrepreneurial orientation (EO) of the family firm as a strong predictor of entrepreneurial actions or explained that its relationship with financial performance or SEW is enough evidence to support decisions and actions taken by the companies when pursuing new ventures (Hernández-Linares and López-Fernández 2018). Thus, some studies have shown how EO is positively related to financial performance in family businesses (Kellermanns and Eddleston 2006; Kellermanns et al. 2012), and others with noneconomic factors, that make a family firm able to build a competitive advantage (Eddleston et al. 2012).

However, in this work, we try to go beyond this EO that, even though necessary, it is not enough to capture the actual meaning of entrepreneurial actions (Bradley and Marino 2011; Goel et al. 2019). It is through the application of resources and competences that key actors in these companies can achieve concrete results, mainly innovation of products, markets or processes. As Goel et al. (2019) suggest, to advance research on entrepreneurial actions in family business, “actors author actions, and therefore a study of actions cannot be far removed from actors” (p. 898).

From a practical standpoint, this work will provide more key elements for public and private initiatives related to promoting entrepreneurship among family enterprises.

## 2 Theoretical Framework

This work is based on research aimed at examining the unique family businesses’ capacities of strategic decision-making (Carney 2005) and the particular nature of their resources and competences (Arregle et al. 2007; Eddleston et al. 2008; Miller et al. 2016; Sirmon and Hitt 2003). According to these authors, family firm resources and competences may acquire the features of being rare, valuable, hard to imitate, and non-substitutable, conditions that are needed for achieving a competitive advantage for a firm (Barney 1991). However, to what extent do these resources and competences align to economic and non-economic aims a family business pursues? This is something that needs a better understanding. This relevance comes from the emphasis that family firms put not only on economic and financial performance but also on socioemotional wealth (SEW) objectives (Berrone et al. 2012; Gómez-Mejía et al. 2007; Zellweger et al. 2013).

## 2.1 Resources and Competences

An analysis of the family firm's resources and competences classifies them as founder's vision, social, emotional, human, and financial capital (Cabrera-Suárez et al. 2001; Goel 2015; Miller et al. 2016; Sirmon and Hitt 2003).

- Vision refers to the degree to which a family firm can maintain an envisioned future over time as relevant. That is to say, the capacity of the vision to remain relevant to the changing conditions and its ability to get all stakeholders on-board (Goel 2015). Some characteristics associated with transferring vision to other generations are its capacity to create a commitment to continue the family's entrepreneurial spirit and the feeling of personal responsibility for new entrepreneurial activities (Reay 2009; Salvato et al. 2010).
- Social capital considers the family's social skills competence and ability to create obligations in a broad domain (Goel 2015). Everyone in the family uses their contacts to acquire resources such as labor, knowledge, clients, financing, and the like to support entrepreneurial actions (Aldrich and Cliff 2003; Aldrich and Ruef 2006; Kreiser 2011). Such social capital often crosses the generations, as when a father passes on his business contacts and reputation to offspring starting a business (Arregle et al. 2007; Ward 2006). This implies to go beyond purely economic relations to include social ones. These include to get to know your suppliers and customers, as friends/associates, encourage family to interact with business partners' and associates' families, and to expose children (potential successors) to a wide variety of contexts—summer camps, international education, among others (Anderson et al. 2005; Klyver 2007; Toledano et al. 2010; Zahra et al. 2004).
- Emotional capital represents the degree to which family members can provide emotional support to each other and maintain emotional harmony, including the extent to which the family can exhibit empathy and reciprocity with others in the family, without pampering or spoiling the others (Goel 2015). Thus, the family must display strong family-to-firm unity in order to translate it into greater corporate entrepreneurship (Eddleston et al. 2012; Kellermanns et al. 2012). Recognizably, conflictual relationships in families increase negative emotions—such as distrust and pessimism-, making the family focus inward, which increases chances of more conflict (Shepherd and Haynie 2009). On the contrary, positive emotions help family members look upward and outward toward the future.
- Human capital includes family members' motivation, training, education, and intellect but more importantly, the degree to which the family can channel human capital into economic and non-economic uses (Goel 2015). Also, it considers how well the family members get along and accept their own and each other's strengths and weaknesses (Eddleston et al. 2012; Kellermanns and Eddleston 2006). Family members are socially and emotionally attached to entrepreneurship, have a reputational stake in the venture, and unwilling to let the family down.

- Financial capital implies the degree to which the family can maintain financial discipline, to live within their means, and the ability to sacrifice the present for the future. All these behaviors contribute to making sure that family members are responsible stewards of family wealth (Goel 2015). Concern for the long-run viability of the business and leaving the firm in a good position for successors may motivate families to use their patient capital to engage in more product-market renewal and cautious innovation (Chrisman and Patel 2012; Miller and Le Breton-Miller 2005).

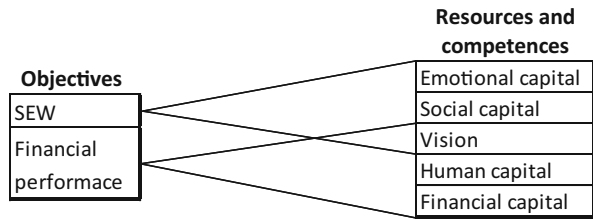
## 2.2 *SEW and Financial Objectives*

Now, turning to the types of objectives that a family firm pursues, it is widely accepted that these include not only economic-financial ones but, giving the aims and interests associated with the family, socioemotional objectives become essential. Socioemotional wealth (SEW) contemplates non-economic aspects of the firm that meet the family's affective needs, such as identity, the ability to exercise family influence, and the perpetuation of the family dynasty (Berrone et al. 2012; Gómez-Mejía et al. 2007; Zellweger et al. 2013). In this respect, it is important to know how family firms' entrepreneurial actions consider ways to maintain their identity, enlarge their reputation, and consolidate for future wealth and cultural imprint of the family business for future generations. In support of adopting these dual objectives, research by Basco (2014) shows how family firms who consider a balance of business and family matters in the management and government decisions of the company can achieve good performance on both types of objectives. Evidence has been presented of how altruistic family relationships or stewardship type of behavior make family firms able to build a competitive advantage (Eddleston et al. 2012).

Connected to this balanced approach, Schepers et al. (2014) show how the level of SEW acts as a moderator factor in the relationship between entrepreneurial orientation (EO) and financial performance. They conclude that an excessive emphasis on SEW affects negatively financial performance in its relationship with entrepreneurial orientation, as evidenced by the appearance of the dark side of SEW issues, such as free riding, and excessive perquisites and privileges of family. Miller et al. (2015) obtain similar results in a four-case study conducted on innovation in family firms. On the one hand, they mention those SEW factors that negatively affect innovation in family firms: feeding parochial interests, meeting personal perquisites, sacrificing resources to achieve family peace, engage in nepotism, installing managers in entrenched positions, and providing jobs and perquisites for relatives. On the other hand, they describe the positive factors associated with creating "evergreen organizations," a concept that entails community contribution, family reputation, and social status. However, none of these studies examines the alignment of the resources of competences with those types of objectives, the purpose in this chapter.

According to what has been exposed, we can anticipate an alignment of objectives, on the one hand, and resources and competences, on the other hand. For those family firms that allocate greater importance to SEW, we would expect to be inclined

**Fig. 1** Alignment between the type of objectives and resources and competences in a family firm. Source: Authors



to give priority to the useful resources and competences such as emotional and social capital for entrepreneurial actions, whereas in the case of those family businesses for which financial-economic issues are paramount, would base their entrepreneurial actions more on financial and human capitals. In a middle position, we find the founder’s vision, as we would require knowing how key actors frame and interpret it in order to identify a possible alignment with either objective. In Fig. 1, we present this alignment graphically.

As seen in the model, this work attempts to associate the different type of resources and competences with those objectives that the family firms privilege, besides providing some narratives of the same interviewees to support or deviate from that association.

### 2.3 Entrepreneurial Orientation

Entrepreneurial orientation (EO) is another construct that is included in this study. As such, we use the concept of EO proposed by Miller (1983). According to this author and others (Covin and Slevin 1991; Craig et al. 2014; Naldi et al. 2007; Salvato 2004), the term entails innovativeness, risk-taking, and pro-activeness. Innovativeness is the predisposition to engage in creativity and experimentation through the introduction of new products/services as well as technological leadership via R&D in new processes. Risk-taking involves taking bold actions by venturing into the unknown, borrowing heavily, and committing significant resources to ventures in uncertain environments. Pro-activeness is an opportunity-seeking, forward-looking perspective characterized by the introduction of new products and services ahead of the competition and acting in anticipation of future demand (Rauch et al. 2009). Diverse studies have approached the use of the EO concept, sometimes adding other two components to EO, aggressiveness, and autonomy (Lumpkin and Dess 1996; Zellweger and Sieger 2012). Alternatively, sometimes, the components of EO are applied separately or as an integrated whole (Casillas and Moreno 2010; Lumpkin and Dess 2001; Merz and Sauber 1995; Naldi et al. 2007; Zahra 2005; Zellweger and Sieger 2012). For this study, we use EO in both ways, as an integrated concept and separately considering its three components (innovativeness, risk-taking, and pro-activeness). We examine how this concept interacts in the relationship between family firm objectives and the resources and competences that companies unfold for undertaking entrepreneurial actions.



**Fig. 2** EO moderating the alignment between the type of objectives and resources and competences in a family firm. Source: Authors

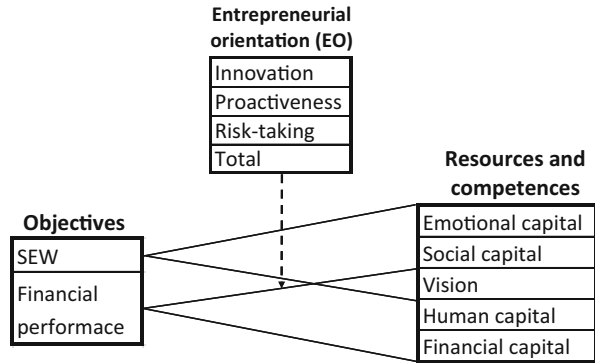


Figure 2 shows a graphical description of the model including EO as a moderating factor.

### 3 Method

The approach of this work that entails the relationship between the family businesses' resources and competences, on the one hand, and the weight they give to financial performance and SEW concerns, on the other hand, are indeed novel. Therefore, we plan to follow a research strategy based on an exploratory and descriptive study, using a case study analysis (De Massis and Kotlar 2014; Eisenhardt 1989; Eisenhardt and Graebner 2007; Yin 1994). We believe that a case study approach, which is firmly grounded in a positivist tradition (Reay 2014), is the appropriate research strategy as it will enable us to undertake a detailed contextual analysis of a number of factors explaining the relationship of the type of objectives and the use of resources and competences in the entrepreneurial actions of family-owned businesses. It also helps to explain how the entrepreneurial orientation (EO) that prevails in the family business may moderate that relationship. This approach is well suited to the examination of contemporary real-life situations, such as the reality of entrepreneurship in Mexican family businesses. Consequently, an exploratory-descriptive case study allows us to gain a better understanding, thus, unraveling which theoretical perspectives and propositions are relevant (De Massis and Kotlar 2014).

We interviewed two owners of family businesses, using a semi-structured interview. This interview aimed at collecting information of the strength of founder's vision and features describing the social, emotional, human, and financial capital and their use for entrepreneurial actions. In addition to knowing how family businesses allocate a different weight (Likert scale from 1 to 5) on the use of these resources and competences for undertaking entrepreneurial activities, we also included a brief description or narrative of why they allocate different importance to them (see Appendix 1).



To examine the differential importance allocated to financial performance versus SEW, we used a similar construct as that used by Schepers et al. (2014). Using a Likert scale (from 1 to 5), this construct measures the importance that the family firm gives to SEW objectives. These include matters related to preserving the family character and tradition of the business, to using the business as a source of employment for family members, and to maintaining the autonomy of control of the business' strategy and goals, as well as the management control. Also, for economic-financial objective, we rated with a similar scale the importance the family firm allocates to sales growth, profit margins, net income, and rate of return performance (see Appendix 2).

To operationalize entrepreneurial orientation (EO), we used the characteristics that are usually associated with entrepreneurship. In this way, we used the 9-item scale that has become the standard for measuring EO (Covin and Slevin 1989, 1991), where three items correspond to each one of the three components of EO, risk-taking, innovativeness, and pro-activeness (see Appendix 3) (Miller 1983; Covin and Slevin 1991; Naldi et al. 2007).

To apply the model, we selected a convenience sample of two of family businesses in the state of Nuevo Leon in Mexico, a region recognized as one of the most dynamic, innovating, and prosperous in the country, controlling in that way for possible regional cultural influences (Hofstede 1983). To consider a family firm as such, we selected a business where the same family or related families possess at least 51% of ownership, at least one family member occupies an executive position, and there is a declared willingness to preserve the firm within the family (Chua et al. 1999). We also consider a family firm that has experienced a generational change, as this is an important criterion that may affect in a comparative study entrepreneurial actions and orientation (Cruz and Nordqvist 2012).

In order to control for the possible influence of the effect of technological change as a logic trigger of innovations (Miller and Le-Breton Miller 2011), we considered family businesses located in a similar industrial sector, metal-mechanics manufacturing. Additionally, in order to control for size, we looked for firms that were already large firms, as considered by the number of employees, above 250 (Rauch et al. 2009; Wiklund 1999). Finally, we looked for family businesses who had certainly undertaken entrepreneurial actions in the last 5 years, whether introducing new products or services, entering new business segments, or implementing new processes.

## 4 The Cases

### 4.1 *Company Antecedents*<sup>1</sup>

Metalmex is one of the family firms interviewed. This firm is within the metal-mechanics manufacturing sector, producing parts for industrial machinery

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<sup>1</sup>We use fictitious names for the companies in order to protect their interests.

assemblers, such as Caterpillar, John Deere, among others. The engineer Orlando Carrillo, 62 years old, and brothers inherited from his father a company, with a different name but a similar line of business. However, very soon after this happened, Orlando decided to found its own company, Metalmex, in 1996, and 8 years ago assumed the role of Chairman of the company's Board of Directors. The company has 300 employees in two different plants, 180 in Monterrey, Nuevo Leon, and 120 in Torreon, Coahuila, and has an annual turnover of US\$20 million. The company exports, mainly indirectly (90%), all its production.

The family has 100% of ownership, and the third generation is now in charge of the management. Three members of this generation participate in the business, the eldest son is the CEO, another son is the General Administrator, and a third son works part-time in charge of continuous improvement projects. Orlando's sister and brother-in-law complete the family in the business.

In the last 5 years, the company has entered into another line of business and has introduced approximately seven product innovations in the market. Also, during this same period, it has implemented innovations in operating and organizational processes, four and two, respectively.

The second family firm is Moldimex, a company that produces seals, adhesives, and molded plastic and polyurethane parts for the "tier 1" auto-parts and electro-domestic industrial sectors. The founder, Armando Reyes Sr., who passed away, started operations 48 years ago, in 1970. The company has three central plants, one in Monterrey, Nuevo Leon, another in Mexico City, and the newest one in Silao, Guanajuato, with a total annual turnover of US\$23 million. A large 95% of total sales are exported, 65% indirectly, and the remaining 5% is directed to the domestic national market.

Three brothers of the second generation, who work as a top management team, are now in charge of the company. The respondent was the engineer Armando Reyes Jr., 51 years old, who is the CEO of Monterrey plant, the largest one. A younger brother entered the company recently. Another brother and three sisters who do not participate actively in the business complete the second generation. Besides, a brother-in-law and a nephew work in the business. The family possesses 100% of the company shares, divided into equal parts among the eight members of the second generation and their mother.

Concerning innovations introduced in the last 5 years, the company counts with three new products and their respective innovative operating processes.

## ***4.2 SEW Versus Economic-Financial Objectives***

Metalmex emphasizes SEW in comparison to economic-financial ones, 4.3 versus 3.8 points, respectively, in a 1–5 scale. The founder/owner allocates the highest importance to maintaining family traditions/character of the business. On the economic-financial side, the least relevant factor is the profit margins of the business.

In the case of Moldimex, the prevalence of economic-financial performance in comparison with SEW is clear, 5 versus 3.5 points, respectively. Among the SEW objectives, to see the company as an essential provider or creator of jobs for the family members received the lowest rate, while the willingness to maintain (family) autonomy on how the business is controlled and managed seem to have a specific relevance.

### ***4.3 Resources and Competences***

Among the resource and competences that Metalmex gives more weight for supporting its entrepreneurial action, we found the financial capital in the first place (4 points), the vision of the founder and emotional capital in second place (3 points), and social and human capitals in third place (2 points).

Thus, financial discipline seems to be a strong competence of the company for supporting entrepreneurial initiatives. In this respect, Orlando recalls the bad experiences of high financial leverage his father's company had in the past. Thus, he tries to maintain a sustainable level of indebtedness and wise management of the family's assets.

About the vision, he mentions that this has supported up to a certain degree their expansion; however, they need to work further on the vision in order to support a greater diversification of the company. In a similar situation, he considers the emotional capital, where they need to consolidate a family council that is still in the early phases of formation.

Orlando is aware that there is a need to make more significant efforts to consolidate their social capital. In the initial stages of the company, it worked well, but many of the representatives of their customers and other business associates moved, and he has not been able to maintain continuity of these relationships with the new family generation. Finally, concerning human capital, he considers that his offsprings need to acquire a more robust academic and experiential formation, not only the one they have acquired in the family firm.

In the case of Moldimex, the vision of the founder and the financial capital are the resource and competences that provide the most significant support for entrepreneurial actions (4 points). In the second place, we found the emotional and human capital (3 points) and finally the social capital (2 points).

Armando argues that he and his brothers have worked to strengthen the vision that changed after his father left the business, a vision more related to enhancing the quality of the products and orientated toward growth in a related line of businesses. He commented that before this redefinition of their vision, they attempted to enter the restaurant industry with very poor results. About the financial capital, they try to maintain a sustainable equilibrium between reinvestment and dividend payments, as various members of the family who, being owners, do not participate actively in the business.

Considering the emotional capital, even though Armando feels the family council has served to solve some possible differences and conflicts concerning new initiatives, they still need to assume greater openness and maturity to channel their differences through this body, mainly those who do not actively participate in the business. Complementing with the human capital, he thinks that despite the educational background of the family members has been in different fields (architecture, agronomy, information systems, among others), they have found ways to cooperate with the business growth. The main point to solve in this respect is the formation and nurturing of attitudes and working discipline of the family members, mainly those of the newer third generation.

Finally, Armando thinks that the resource and competence that is less used is the social capital. There is not a clear view of how these relationships may provide support to the company, to reinforce their entrepreneurial action. These relationships have been limited to the ones they have been able to create while attending meetings of the automotive and electro-domestic clusters.

#### 4.4 Entrepreneurial Orientation

In a scale from 1 to 7, Metalmex shows an entrepreneurial orientation (EO) of 4.6 that can be interpreted as a slightly high EO, where the lowest score is reached on those factors related to risk-taking, 4.3. For Moldimex, this score was 4.2 that can also be considered as slightly high; however, for this company, the lowest score was achieved by the component of pro-activeness, 2.3. In both companies, the innovativeness component was the most relevant in their EO.

Summarizing the scores achieved in the three constructs for each company, we have (see Figs. 3 and 4):

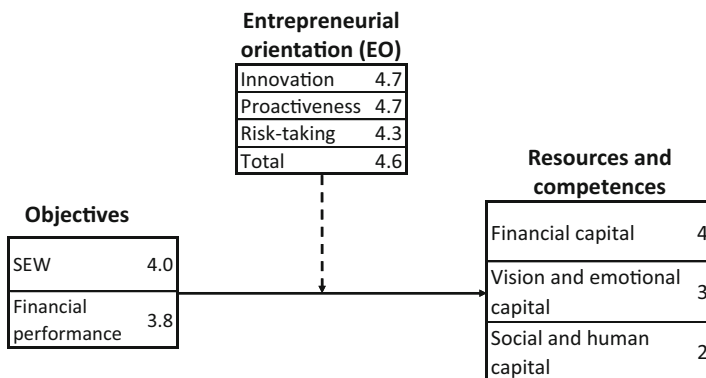


Fig. 3 Alignment between the type of objectives and resources and competences: Metalmex

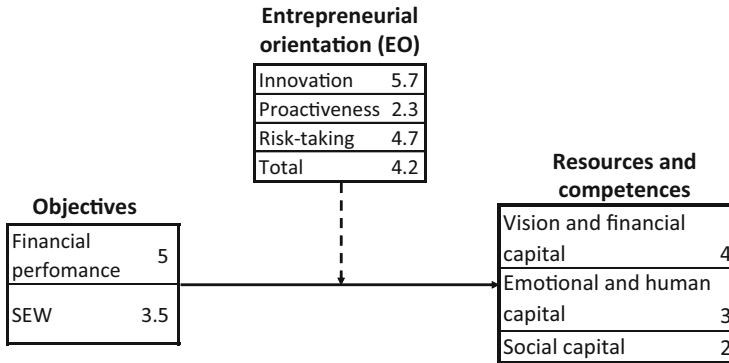


Fig. 4 Alignment between the type of objectives and resources and competences: Moldimex

## 5 Discussion

It may seem odd the greater weight that Metalmix gives to its financial capital resource and competence, given its inclination toward SEW. However, looking closer, the financial problems that the founder had when initiating the business after he and his brothers inherited from their father have made the owner quite aware of avoiding any situation that may pose a severe threat to his family wealth. This introduces as a possible explanation the behavioral agency model (BAM) exposed by Wiseman and Gomez-Mejia (1998), who argue that when threats to the viability of a firm put the achievement of both economic and family goals at risk, the attention and decision framing of family owners and managers shift toward improving firm financial performance to safeguard SEW.

Then, in second place, Metalmix has used the emotional capital and the founder’s vision to support its objectives. In that sense, the owner mentions a need to envision new options of investment to reduce risks for the family opening new initiatives in other markets. Besides, it is important for the owner to encourage the family members to align their emotions and attitudes toward a more shared vision of the company.

It may appear contradictory the fact that given the importance that for Metalmix represents SEW, there is a weak social capital to back up its entrepreneurial actions. However, the owner is quite conscious of the need to make further attempts to involve the second generation in reconstructing these networks that were important at a certain point in the expansion of the business. Also, in this least important position among the entrepreneurial resources and competences, we found the human capital; although necessary for supporting entrepreneurial actions, there is a recognition that currently is far from being a strength, as mentioned before.

The level of entrepreneurial orientation (EO) of the company has served to promote a relationship between its objectives and the display of its resources and competences, as witnessed by the innovations Metalmix has been able to introduce in the last 5 years. As argued, this is high enough to make the company willing to

introduce new products, businesses, and processes. Only the risk-taking component of EO registered a small difference below the mark of innovation and prospectiveness.

In the case of Moldimex, there seems to be a more marked alignment of the resources and competences with the preference for financial performance. The family conducting the business has among its priorities to deal with those family members who have a share of the company but do not participate in its governance or management in order to maintain a reasonable dividend. In this way, they have been able to finance essential investments required by new equipment and machinery for the new processes. Regarding the vision considered in a prominent position too, it is clear that this has allowed Moldimex to avoid making mistakes on pursuing initiatives that do not align with other businesses and may affect its financial performance seriously.

Human and emotional capitals occupy a middle position in those resources and competences that support their entrepreneurial actions. In this sense, it is necessary for the CEO/owner to channel those high educations and abilities of the coming generations toward more productive and professional positions in the company.

Differently to Metalmex, and more logically aligned with the less weight that Moldimex assigns to SEW, there is an acceptance of social capital playing a less critical role in its entrepreneurial initiatives. In part, this reflects a particular concern that promoting well-established social networks and relationships would divert the professionalization of the business and downplay those merit factors that for the family are most valuable for enhancing its performance.

It seems important to comment about the little importance that Moldimex gives to the company being a provider or creator of jobs for the family members or for maintaining continuity of the business as part of the family tradition, both factors related to SEW. In this respect, as Armando mentions, some voices among the family members do not discard the sale of the company in the case of an attractive proposition.

Concerning the entrepreneurial orientation (EO) of Moldimex, we also find a score above the middle point, reinforcing in this manner the crucial innovations that the company has introduced in products and processes. However, stands out the low score reached by the pro-activeness component. The attitude was taken by Moldimex to avoid confronting its competitors directly and by investing in innovations where there have been already significant advances, beyond the basic research, explains this score.

## 6 Conclusion

This study has provided some important elements for examining and improving the entrepreneurial activities of a company. By aligning the objectives that are most important for a family business with the types of resources and competences it manages to achieve those objectives, it is possible to provide better results of its

entrepreneurial actions, mainly in the innovation field. The insights provided by the cases analyzed are relevant not only for theoretical purposes but for providing practitioners with more tools to have a better alignment and enhance the effectiveness of its entrepreneurial orientations and actions.

Given the case study nature of this work, it is not possible to generalize the results to other contexts. However, the purpose of this type of studies is not to achieve a statistical generalization but an analytical generalization, as it refers to generalization from empirical observations to theory, rather than a population (Yin 1994). With this in mind, this work can provide some interesting propositions for examining deeper the field of entrepreneurship resources and the aims that family firms pursue. Therefore, we propose that:

- P1. When there is a higher number of family owners, some of them participating actively in the business and other not, an increase in the level of professionalization of the resources and competences used for entrepreneurial actions becomes more effective.
- P2. There is a need to reinterpret social capital for supporting entrepreneurial activities in a way that does not imply relationships that can demerit the professionalization that a family business pursues.
- P3. The trajectory of the family firm, mainly the way in which it was able to overcome challenges that threatened its survival, will significantly affect its disposition to support entrepreneurial actions by favoring certain types of resources and competences over others.
- P4. The coexistence of different generations in the control and management of a family business, even though makes more complex to agree on common objectives, mainly SEW, provides a full range of resources and competences that are required for entrepreneurial actions.
- P5. In the previous proposition, there is a clear need to instrument governance structures to channel those different aims and interests on behalf of some common objectives making the emotional capital a pivotal contributor to entrepreneurship. Propositions 4 and 5 complement other studies that find that the more generations of the family involved in a family firm, the more the firm focuses on innovative behaviors (Duran-Encalada et al. 2012; Wang and Poutziouris 2010; Zahra 2005). Multiple-generation firms must adapt to changes in their environments by rejuvenating and reinventing themselves over time if they are to sustain the same level of growth and financial inheritance of the previous generation.
- P6. When a company tends to emphasize its financial objectives, the possibility of seeing the company as a source of employment for family members tends to reduce. This will give place to consider higher participation of non-family members involved in entrepreneurial actions, with their particular resources and competences.

Finally, we would like to motivate other research that may seem relevant for complementing the explanations provided in this work. One of them has to do with the role that governance structures may have on the interaction of objectives, the use of resources and competences, and to explain the role of various governance structures that will be most and least entrepreneurially oriented in the family firms (Le Breton-Miller et al. 2015).

## Appendix 1

*Competences assessment:* Rate your family resources and competences on a scale 1–5, where one means—“I believe we are poor in this competency,” 5 means—“I believe we are great at this competency.” In addition to the rating, make a few notes in each cell about why you gave the particular rating.

Resource and competence rating and notes	1	2	3	4	5
1. Founder’s vision—the degree to which it is dynamic, and relevant to the changing conditions, and can get all stakeholders on board	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Family’s social capital—the degree to which the family develops business and social relationships (friendships), with a variety of people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Family’s emotional capital—the degree to which the family can keep negative emotions in check, and promote genuine respect and love for family members, even in the face of differences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Family’s human capital—the degree to which the family can use the talents, interest, background, experience, and potential of family members to promote the family’s wealth objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Family’s financial capital—the degree to which the family can maintain financial discipline, and make needed sacrifices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Source: Adapted from Goel (2011)

## Appendix 2

*Importance of objectives:* Rate how important is for your business the achievement of the following factors related to performance, where 1 = totally unimportant and 5 = totally important:

1. Maintaining family traditions/family character of the business?
2. Creating/saving jobs for the family?
3. Keep independence in ownership, preserving autonomy on strategy and goals the business pursues?
4. Keep independence in management, maintaining autonomy in how the business is managed day-to-day?
5. Sales growth of the business?
6. Profit margins of the business?
7. Net income of the company?
8. Rate of return on new projects?

Source: Adapted from Schepers et al. (2014)



### Appendix 3

*Entrepreneurial Orientation:* Answer the following questions rating on a scale 1–7 the description that best characterizes your business:

Question	Rate						
	1	2	3	4	5	6	7
1. In general, the top managers of my company favor:	a strong emphasis on the marketing of tried and true products or services						a strong emphasis on R&D technology leadership and innovations
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. How many new lines of products or services has your company marketed during the past 5 years?	No new lines or products or services						Very many new lines of products and service
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Changes in product or service lines have:	been mostly of a minor nature						usually been quite dramatic.
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. In dealing with its competitors, my firm:	typically responds to actions which competitors initiate						typically initiates actions which competition then respond to
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. In dealing with its competitors, my firm:	is very seldom the first business to introduce new products/services, administrative techniques, operating technologies, etc.						is very often the first business to introduce new products/services, administrative techniques, operating technologies, etc.
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. In dealing with its competitors, my firm:	typically seeks to avoid competitive clashes, preferring a "live-and-let-live" posture						typically adopts a very competitive, "undo-the-competitors" posture
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. In general, the top managers of my firm have:	a strong proclivity for low risk projects (with normal and certain rates of return)						a strong proclivity for high risk projects (with chances of very high returns)
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. In general, the top managers of my firm believe that:	owing to the nature of the environment, it is best to explore it gradually via timid, incremental behavior						owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objectives
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. When confronted with decision-making situations involving uncertainty, my firm:	typically adopts a cautious, "wait-and-see" posture in order to minimize the probability of making costly decisions						typically adopts a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Source: Adapted from Covin and Slevin (1989, 1991)

## References

- Aldrich, H. E., & Cliff, J. E. (2003). The pervasive effects of family on entrepreneurship: Toward a family embeddedness perspective. *Journal of Business Venturing, 18*(5), 573–596.
- Aldrich, H. E., & Ruef, M. (2006). *Organizations evolving* (2nd ed.). Thousand Oaks: Sage.
- Anderson, A. R., Jack, S. L., & Dodd, S. D. (2005). The role of family members in entrepreneurial networks: Beyond the boundaries of the family firm. *Family Business Review, 28*(2), 135–154.
- Arregle, J., Hitt, M., Sirmon, D., & Very, P. (2007). The development of organizational social capital: Attributes of family firms. *Journal of Management Studies, 44*(1), 73–95.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17* (1), 99–120.
- Basco, R. (2014). Exploring the influence of the family upon firm performance: Does strategic behavior matter? *International Small Business Journal, 32*(8), 967–995.
- Berrone, P., Cruz, C., & Gómez-Mejía, L. R. (2012). Socioemotional wealth in family firms: Theoretical dimensions, assessment approaches, and agenda for future research. *Family Business Review, 25*(3), 258–279.
- Bradley, A. G., & Marino, L. (2011). The epistemology of entrepreneurial orientation: Conceptual formation, modeling, and operationalization. *Entrepreneurship Theory and Practice, 35*(5), 989–1024.
- Cabrera-Suárez, K., Saá-Pérez, D., & García-Almeida, D. (2001). The succession process from a resource- and knowledge-based view of the family firm. *Family Business Review, 14*(1), 37–48.
- Carney, M. (2005). Corporate governance and competitive advantage in family- controlled firms. *Entrepreneurship Theory and Practice, 29*(3), 1042–2587.
- Casillas, J. C., & Moreno, A. M. (2010). The relationship between entrepreneurial orientation and growth: The moderating role of family involvement. *Entrepreneurship & Regional Development, 22*(3–4), 265–291.
- Chrisman, J., & Patel, P. (2012). Variations in R&D investments of family and nonfamily firms: Behavioral agency and myopic loss aversion perspectives. *Academy of Management Journal, 55* (4), 976–997.
- Chua, J. H., Chrisman, J. J., & Sharma, P. (1999). Defining the family business by behavior. *Entrepreneurship Theory and Practice, 23*(4), 19–39.
- Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal, 10*(1), 75–87.
- Covin, J. G., & Slevin, D. P. (1991). A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship Theory and Practice, 16*(1), 7–26.
- Craig, J. B., Pohjola, M., Kraus, S., & Jensen, S. H. (2014). Exploring relationships among proactiveness, risk-taking and innovation outputs in family and non-family firms. *Creativity and Innovation Management, 23*(2), 199–210.
- Cruz, C., & Nordqvist, M. (2012). Entrepreneurial orientation in family firms: A generational perspective. *Small Business Economics, 38*(1), 33–49.
- De Massis, A., & Kotlar, J. (2014). The case study method in family business research: Guidelines for qualitative scholarship. *Journal of Family Business Strategy, 5*(1), 15–29.
- Duran-Encalada, J. A., San Martín-Reyna, J. M., & Montiel-Campos, H. (2012). A research proposal to examine entrepreneurship in family business. *Journal of Entrepreneurship, Management and Innovation, 8*(3), 58–77.
- Eddleston, K. A., Kellermanns, F. W., & Sarathy, R. (2008). Resource configuration in family firms: Linking resources, strategic planning and technological opportunities to performance. *Journal of Management Studies, 45*(1), 26–50.
- Eddleston, K. A., Kellermanns, F. W., & Zellweger, T. M. (2012). Exploring the entrepreneurial behavior of family firms: Does the stewardship perspective explain differences? *Entrepreneurship Theory and Practice, 37*(2), 347–367.
- Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review, 14*(4), 532–550.

- Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, 50(1), 25–32.
- Goel, S. (2011). *Congreso sobre empresas familiares*. In Presentation at Universidad de las Americas Puebla, CIEF-Coparmex, August 21.
- Goel, S. (2015). *Nurturing entrepreneurial resources in family businesses*. In Presentation at IFERA Family Business Day, Mexico City, Mexico.
- Goel, S., Jones, R. J., III, & Karry, R. (2019). Conceptualizing and investigating entrepreneurial action in family firms: A few promising directions. In E. Memili & C. Dibrell (Eds.), *The Palgrave Handbook among family firms* (pp. 873–907). London: Palgrave.
- Gómez-Mejía, L. R., Haynes, K. T., Núñez-Nickel, M., Jacobson, K. J. L., & Moyano-Fuentes, J. (2007). Socioemotional wealth and business risks in family-controlled firms: Evidence from Spanish Olive Oil Mills. *Administrative Science Quarterly*, 52(1), 106–137.
- Habbershon, T., & Williams, M. (1999). A resource-based framework for assessing the strategic advantages of family firms. *Family Business Review*, 12(1), 1–25.
- Haynes, G., Walker, R., Rowe, B., & Hong, G. (1999). The intermingling of business and family finances in family-owned businesses. *Family Business Review*, 12(3), 225–239.
- Hernández-Linares, R., & López-Fernández, M. C. (2018). Entrepreneurial orientation and the family firm: Mapping the field and tracing a path for future research. *Family Business Review* 2018, 31(3), 318–351.
- Hofstede, G. (1983). The cultural relativity of organizational practices and theories. *Journal of International Business Studies*, 14(2), 75–89.
- Kellermans, F. W., & Eddleston, K. (2006). Corporate venturing in family firms: Does the family matter? *Entrepreneurship Theory and Practice*, 30(6), 837–854.
- Kellermans, F. W., Eddleston, K., Sarathy, R., & Murphy, F. (2012). Innovativeness in family firms: A family influence perspective. *Small Business Economics*, 38(1), 85–101.
- Klyver, K. (2007). Shifting family involvement during the entrepreneurial process. *International Journal of Entrepreneurial Behaviour and Research*, 13(5), 258–277.
- Kreiser, P. M. (2011). Entrepreneurial orientation and organizational learning: The impact of network range and network closure. *Entrepreneurship Theory and Practice*, 35(5), 1025–1050.
- Le Breton-Miller, I., Miller, D., & Bares, F. (2015). Governance and entrepreneurship in family firms: Agency, behavioral agency, and resource-based comparisons. *Journal of Family Business Strategy*, 6(1), 58–62.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135–172.
- Lumpkin, G. T., & Dess, G. G. (2001). Linking two dimensions of entrepreneurial orientation to firm performance: The moderating role of environment and industry life cycle. *Journal of Business Venturing*, 16, 429–451.
- Merz, G. R., & Sauber, M. H. (1995). Profile of managerial activities in small firms. *Strategic Management Journal*, 16(7), 551–564.
- Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770–791.
- Miller, D., & Le Breton-Miller, I. (2005). *Managing for the long run*. Boston: Harvard Business School Press.
- Miller, D., & Le-Breton Miller, I. (2011). Governance, social identity, and entrepreneurial orientation in closely held public companies. *Entrepreneurship Theory and Practice*, 35(5), 1051–1076.
- Miller, D., Wright, M., Le Breton-Miller, I., & Scholes, L. (2015). Resources and innovation in family businesses: The Janus-face of Socioemotional preferences. *California Management Review*, 58(1), 20–40.
- Miller, D., Steier, L., & Le Breton-Miller, I. (2016). What can scholars of entrepreneurship learn from sound family businesses? *Entrepreneurship Theory and Practice*, 40(3), 445–455.
- Naldi, L., Nordqvist, M., Sjöberg, K., & Wiklund, J. (2007). Entrepreneurial orientation, risk taking, and performance in family firms. *Family Business Review*, 20(1), 33–47.

- Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. (2009). Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship Theory and Practice*, 33(3), 761–787.
- Reay, T. (2009). Family business meta-identity, institutional pressures, and ability to respond to entrepreneurial opportunities. *Entrepreneurship Theory and Practice*, 33(6), 1265–1270.
- Reay, T. (2014). Publishing qualitative research. *Family Business Review*, 27(2), 95–102.
- Salvato, C. (2004). Predictors of entrepreneurship in family firms. *The Journal of Private Equity*, 7(3), 68–76.
- Salvato, C., Chirico, F., & Sharma, P. (2010). A farewell to the business: Championing exit and continuity in entrepreneurial family firms. *Entrepreneurship and Regional Development*, 22(3-4), 321–348.
- Schepers, J., Voordeckers, W., Steijvers, T., & Eddy Laveren, E. (2014). The entrepreneurial orientation-performance relationship in private family firms: The moderating role of socioemotional wealth. *Small Business Economics*, 43(1), 39–55.
- Shepherd, D., & Haynie, M. (2009). Family business, identity conflict, and an expedited entrepreneurial process: A process of resolving identity conflict. *Entrepreneurship Theory and Practice*, 33(6), 1245–1264.
- Sirmon, D. G., & Hitt, M. A. (2003). Managing resources: Linking unique resources, management, and wealth creation in family firms. *Entrepreneurship Theory and Practice*, 27(4), 339–358.
- Toledano, N., Urbano, D., & Bernadich, M. (2010). Network and corporate entrepreneurship. *Journal of Organizational Change Management*, 23(4), 396–412.
- Wang, Y., & Poutziouris, P. (2010). Entrepreneurial risk-taking: Empirical evidence from UK family firms. *International Journal of Entrepreneurial Behaviour & Research*, 16(5), 370–388.
- Ward, J. (2006). *Unconventional wisdom: Counterintuitive insights for family business success*. New York: Wiley.
- Wiklund, J. (1999). The sustainability of the entrepreneurial orientation-performance relationship. *Entrepreneurship Theory and Practice*, 24(1), 37–48.
- Wiseman, R. M., & Gomez-Mejia, J. R. (1998). A behavioral agency model of managerial risk taking. *Academy of Management Review*, 23(1), 133–153.
- Yin, R. (1994). *Case study research* (2nd ed.). Thousand Oaks, CA: Sage.
- Zahra, S. A. (2005). Entrepreneurial risk-taking in family firms. *Family Business Review*, 18(1), 23–40.
- Zahra, S. A., Hayton, J. C., & Salvato, C. (2004). Entrepreneurship in family vs. non-family firms: A resource-based analysis of the effect of organizational culture. *Entrepreneurship Theory and Practice*, 28(4), 363–381.
- Zellweger, T., & Sieger, P. (2012). Entrepreneurial orientation in long-lived family firms. *Small Business Economics*, 38(1), 67–84.
- Zellweger, T. M., Nason, R. S., Nordqvist, M., & Brush, C. G. (2013). Why do family firms strive for nonfinancial goals? An organizational identity perspective. *Entrepreneurship Theory and Practice*, 37(2), 229–248.