Tatiana Beliaeva

COMPLEMENTARITY AND CONTEXTUALIZATION OF FIRM-LEVEL STRATEGIC ORIENTATIONS
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Strategic orientations, which reflect strategic behaviors implemented by a firm, have been widely associated with a firm’s competitiveness and performance. An extensive theoretical and empirical consideration has been received by entrepreneurial orientation, market orientation, and learning orientation, which reflect a firm’s behavior toward new product creation, market, and organizational learning, respectively. Extant literature has examined the relationship between strategic orientations and firm performance, yet research has often focused on one orientation in isolation without considering the orientations’ relative performance contributions and potential complementarities. Furthermore, previous results are ambiguous with regard to performance implications of strategic orientations, suggesting a closer examination of contextual effects. This dissertation aims to narrow these gaps by investigating how strategic orientations are individually and jointly related to firm performance in different environmental contexts.

The study utilizes a quantitative methodology based on three datasets obtained from small and medium-sized enterprises from different countries. Complementarity of strategic orientations and their embeddedness in various country- and industry-level contexts are examined. The results suggest different individual effects of entrepreneurial, market, and learning orientations on firm performance, and highlight the significant role of their shared effect. By questioning complementarity of entrepreneurial and market orientations during an economic crisis and revealing distinctive effects of entrepreneurial orientation in developed and emerging markets, as well as across institutional and industry settings, the study emphasizes contextuality of strategic orientations–performance relationship. These results contribute to strategic orientations literature by applying an integrative approach to the phenomenon and specifying performance effects of strategic orientations in a wide variety of contexts. Moreover, the results have implications for research on complementarities in organizations as well as contextual research in management. The dissertation comprises an introductory part with an overview of the literature and discussion of the framing, methodology, results, and contributions of the whole study, as well as five independent publications.

Keywords: strategic orientation, entrepreneurial orientation, market orientation, learning orientation, firm performance, complementarity, contextualization, small and medium-sized enterprises
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Contents

Abstract

Acknowledgements

Contents

List of publications

1 Introduction
  1.1 Research background and motivation ..................................................... 11
  1.2 Research objective, research gaps, and research questions ..................... 13
  1.3 Definitions and scope .............................................................................. 17
  1.4 Structure of the study .............................................................................. 19

2 Theoretical background
  2.1 State-of-the-art of strategic orientation concept ...................................... 21
     2.1.1 Historical overview ..................................................................... 21
     2.1.2 Strategic orientations in management literature .......................... 22
  2.2 The concepts of different strategic orientation types .............................. 24
     2.2.1 Entrepreneurial orientation ......................................................... 24
     2.2.2 Market orientation ....................................................................... 25
     2.2.3 Learning orientation .................................................................... 26
  2.3 Strategic orientations and firm performance ........................................... 27
     2.3.1 Contingency theory ..................................................................... 27
     2.3.2 Multiple strategic orientations – complementary effects ............ 29
  2.4 Contextualizing strategic orientations–performance relationship .......... 32
     2.4.1 Context and its dimensions ......................................................... 32
     2.4.2 Economic crisis context .............................................................. 34
     2.4.3 Institutional context ..................................................................... 35
     2.4.4 Industry context........................................................................... 37
  2.5 Theoretical framework of the study ........................................................ 39

3 Methodology and research design
  3.1 Philosophy of science considerations..................................................... 43
  3.2 Survey research design........................................................................... 44
     3.2.1 Research process ......................................................................... 44
     3.2.2 Sampling and data collection ...................................................... 46
     3.2.3 Measures ..................................................................................... 49
  3.3 Data analysis............................................................................................ 53
  3.4 Reliability and validity .......................................................................... 55
  3.5 A summary of the research methods in individual publications .......... 58
4 Summary of the publications and the results 61
4.1 Publication I: Orienting toward sales growth? Decomposing the variance attributed to three fundamental organizational strategic orientations .................................................................................................................. 61
4.1.1 Background and objective ........................................................................... 61
4.1.2 Results and contribution ............................................................................. 62
4.2 Publication II: Benefiting from economic crisis? Strategic orientation effects, trade-offs, and configurations with resource availability on SME performance ........................................................................................................ 63
4.2.1 Background and objective ........................................................................... 63
4.2.2 Results and contribution ............................................................................. 64
4.3 Publication III: Institutional contextualization of the entrepreneurial orientation-performance relationship ................................................................................................................ 65
4.3.1 Background and objective ........................................................................... 65
4.3.2 Results and contribution ............................................................................. 66
4.4 Publication IV: As different as chalk and cheese? The relationship between entrepreneurial orientation and SMEs’ growth: evidence from Russia and Finland ........................................................................................................ 67
4.4.1 Background and objective ........................................................................... 67
4.4.2 Results and contribution ............................................................................. 68
4.5 Publication V: Entrepreneurial orientation and firm performance in different environmental settings: contingency and configurational approaches ........................................................................................................ 68
4.5.1 Background and objective ........................................................................... 68
4.5.2 Results and contribution ............................................................................. 69
4.6 A summary of the results of the whole study .............................................. 70

5 Discussion and conclusions 73
5.1 Answering the research questions ................................................................ 73
5.2 Theoretical contributions ............................................................................. 77
5.2.1 Implications for strategic orientation research ......................................... 78
5.2.2 Implications for organizational complementarity research ................. 80
5.2.3 Implications for contextual research in management ....................... 81
5.3 Practical implications .................................................................................. 82
5.4 Limitations and suggestions for further research ..................................... 83

References 87

Publications
List of publications

This dissertation is based on the following papers. The rights have been granted by publishers for including the papers in the dissertation.


Author’s contribution

I. The publication was a joint work, in which the author was responsible for literature review, data analysis, and interpretation of results. The author participated in data collection and was responsible for questionnaire translation, sample development, and survey of Finnish firms. The questionnaire design and data collection on Russian firms were executed by the co-authors with the author’s involvement. The theoretical framework, discussion, writing, and revision of the study were done in cooperation with the co-authors.

II. The publication was a joint work, in which the author was responsible for literature review, data analysis, interpretation of results, and revising the paper. The author took part in data collection, including questionnaire development and validation, sample generation, and data screening. The data were collected within a research project of Graduate School of Management of St. Petersburg University and School of Economics and Management of Far Eastern Federal University. The theoretical development, discussion, and writing of the study were jointly performed with the co-authors. The author was the corresponding author of this publication.

III. The publication was a joint work, in which the author was responsible for literature review, data analysis, and interpretation. The collection of global data was co-organized by the University of St. Gallen and the University of Bern. It was provided for analysis by Professor Shirokova as the national leader of the research team in Russia. The theoretical framework, discussion, and writing of the study were done in cooperation with the co-authors. The conference paper was revised and later submitted to a journal. The author was the corresponding author of this publication.

IV. The publication was a joint work, in which the author was responsible for literature review, data collection on Finnish firms, data analysis, and interpretation of results. The data on Russian firms were collected by the co-authors with the author’s involvement. The theoretical framework, discussion, writing, and revision of the study were done in cooperation with the co-authors.

V. The publication was a joint work, in which the author was responsible for literature review, data collection on Finnish firms, data analysis, and interpretation of results. The data on Russian firms were collected by the co-authors with the author’s involvement. The theoretical framework, discussion, writing, and revision of the study were done in cooperation with the co-authors.
1 Introduction

This chapter describes the research background and motivation for this study. It sets the research objective, research questions, outlines definitions, scope of the research, and illustrates the dissertation’s structure.

1.1 Research background and motivation

Small and medium-sized enterprises (SMEs) are universally considered to be essential for delivering economic development and growth. They have an important role in national economies around the world as they generate employment, add value, and contribute to competitiveness, innovation, and general welfare both nationally and internationally (OECD, 2017). However, these contributions vary widely across firms, countries, and sectors. At present, SMEs account for over 50% of GDP in many developed countries; however, they lag behind in their contribution in developing economies. For example, SMEs represent 98% of the company population in Finland, produce 51% of the total increase in gross value in the whole economy, and employ 57% of the total personnel (Statistics Finland, 2018). However, the SME sector in Russia produces about 21% of GDP, accounts for 25% of total employment, and has been steadily growing over the last few years (Federal State Statistics Service, 2018). All these factors support the considerable economic importance and growth potential of SMEs, as well as the significant differences across business environments. As such, because of the role played by SMEs in economy, their development has become a strategic priority for many countries.

As SMEs are seen to be increasingly indispensable to economic well-being, it is important to understand how they can ensure their viability and enhance performance in their surrounding environments. Compared to larger firms, SMEs typically have a simpler organizational structure, often occupy market niches, and are generally considered to be more flexible in reacting quickly to changes in the external environment (Bartz and Winkler, 2016). However, SMEs lack certain advantages that are exploited by many large organizations such as economies of scale, experience, and reputation. The small size may also lead to problems in raising capital, create difficulties in hiring and training employees, as well as high relative administrative expenses. Such ‘liability of smallness’ (Aldrich and Auster, 1986) makes SMEs less stable to market changes, reduces their chances of survival, and is one of the reasons for their high failure rates (Pe'er, Vertinsky and Keil, 2016; Strotmann, 2007).

SMEs tend to be more exposed to various environmental pressures. In particular, because of internal constraints, SMEs are affected by market barriers and inefficiencies, which may prevent them from accessing strategic resources such as finance, management capacity, and skills. This lack of access, in turn, limits their productivity and innovation (OECD, 2017). Moreover, certain aspects of institutional framework result in disproportionate burdens on SMEs (OECD, 2017), which is particularly
relevant for emerging market firms (Bruton, Ahlstrom and Obloj, 2008). For example, political instability, infrastructure problems, and the lack of strong legal frameworks and well-defined property rights are often associated with emerging markets (Hoskisson et al., 2000). Furthermore, SMEs are highly vulnerable to economic volatility and crises. A recent example is the exogenous oil price shock and deterioration of economic environment in Russia in 2014–2016, which impacted firms in the form of profit shrinkage and diminished ability to finance new projects, as reported by Russian managers (PWC, 2015). Overall, a significant proportion of the world economy is represented by SMEs, and environmental pressures are greater for smaller firms compared to their larger rivals (Chen and Hambrick, 1995). Therefore, an understanding of how firms operating within various challenging environmental conditions may attain higher performance is particularly important.

Firm performance and competitiveness are heavily emphasized areas in strategic management research and practice. The mainstream strategy literature of the 1980s focused on studying links between a firm’s competitive advantage and its beneficial position in the industry such as having few rivals and lack of threat of new entrants and substitutes (Porter, 1980; 1985). However, later on, both strategy researchers and business practitioners have focused their attention on a firm’s internal attributes such as unique resources, capabilities, and knowledge, and recognized that higher performance may be largely caused by utilization of valuable resources and capabilities (Barney, 1991). Competing within an ever evolving business environment may require firms to develop special capabilities, resources, and behaviors such as innovativeness, customer commitment, or adaptability.

To guide firms in building a resource base and enacting behavior, they rely on a particular strategic direction according to how they perceive the environment that surrounds them (Fulford and Rizzo, 2009). In this sense, strategic management literature has offered the concept of strategic orientation, which provides a framework for differentiating the way in which organizations conduct their business activity (Venkatraman, 1989a). In this dissertation, strategic orientations are viewed as strategic behaviors implemented by a firm to enhance performance (Deshpandé, Grinstein and Ofek, 2012). Firms may behave in a variety of ways to approach customers, competitors, and make use of their resources to pursue high performance, which reflects their strategic orientation.

Among the most prominent strategic orientations that have received considerable attention from both managers and management scholars are entrepreneurial orientation (EO), market orientation (MO), and learning orientation (LO) (Hakala, 2011; Lonial and Carter, 2015). In particular, these three orientations reflect a firm’s strategic behavior toward exploring new product-market opportunities (EO; Covin and Slevin, 1989; Lumpkin and Dess, 1996); market and creation of superior value for customers (MO; Kohli and Jaworski, 1990; Narver and Slater, 1990); and proactive learning that enables a firm to question long-held routines and continue to evolve (LO; Sinkula,
Baker and Noordewier, 1997). Each orientation represents distinct value-creating behaviors regarding entrepreneurship, marketing, and learning.

In addition to their growing consideration in management literature, EO, MO, and LO have been selected in this study for the following reasons. First, these strategic orientations can be considered as general or overarching concepts. This is because other orientations, such as innovation or customer relationship orientation, overlap with EO, MO, and LO, or their components to some extent. Second, EO, MO, and LO can be studied in firms of different industries, scope of operations or other firm characteristics, whereas the analysis of some other strategic orientations may be more sample dependent such as international orientation, which is more relevant for internationally operating firms. Third, EO, MO, and/or LO have been shown to have complementary characteristics and can be combined in strategic decision-making at one firm (Ho, Plewa and Lu, 2016). For example, the explorative nature of EO can be adopted together with MO to better tailor innovations to markets and reduce risks. By developing EO, MO firms may gain new innovative opportunities and greater differentiation from competitors. Moreover, LO adds to this constant examination of the environment and coordination of internal processes for timely adaptation. Finally, the strategic management literature provides specific instruments to measure the level of EO, MO, and LO in a firm, which allows to empirically assess their relationship with firm performance.

To summarize, strategic management is related to the survival and firm performance. Recently, firm-specific strategic directions and behaviors captured by strategic orientations have been focused on as a means through which firms may operate to pursue their performance goals. Therefore, there is considerable interest in understanding how different strategic orientations contribute to firm performance, and which of them are more valuable in different environments. This dissertation focuses on three firm-level orientations, i.e., EO, MO, and LO, and incorporates multiple contextual facets in their investigation. By taking such a broad perspective on strategic orientations, the study aims to integrate and extend the knowledge base on the impact of these orientations on firm performance.

1.2 Research objective, research gaps, and research questions

The development of strategic orientations in a firm is often viewed to have significant performance implications (Kropp, Lindsay and Shoham, 2006; Lonial and Carter, 2015). While there is growing interest to examine strategic orientations, most studies have focused on the effects of a single orientation in isolation without considering their potential complementarity for a firm’s strategic outcomes (e.g., Calantone, Cavusgil and Zhao, 2002; Kirca, Jayachandran and Bearden, 2005; Rauch et al., 2009). Moreover, previous studies have also observed that a combination of orientations may enable firms to perform better compared to adhering to a single orientation alone (Atuahene-Gima and Ko, 2001; Deutscher et al., 2016; Hakala, 2011). Yet, there is lack of agreement on
the relationships between multiple strategic orientations and their performance contributions (Hakala, 2011), and several approaches are currently being examined. For example, a number of studies have explored direct effects of EO, MO, and/or LO on firm performance, some modeling orientations with interactions with each other (Boso, Story and Cadogan, 2013; Deutscher et al., 2016) and others without interactions with each other (Hult, Hurley and Knight, 2004; Laukkanen et al., 2013), whereas other studies have examined indirect orientation effects mediated by other orientations (Dutta, Gupta and Chen, 2016; Nguyen, Barrett and Fletcher, 2006) or have viewed orientations as indicators of higher-order constructs (Hult, Ketchen and Arrfelt, 2007; Lonial and Carter, 2015). Most studies have integrated two strategic orientations; however, understanding the complex relationship and relative performance contribution of all EO, MO, and LO is far less prevalent and remains unclear (Hakala, 2011). Such an integrative approach to strategic orientations is the basis for increased insight about which orientations may be most important for enhancing firm performance. As shown in previous studies, these strategic orientations are closely related (Grinstein, 2008), and leaving some of them unaccounted may inhibit uncovering complete performance benefits from their potential complementarity, as well as producing more confident study relationships.

Furthermore, while empirical studies commonly report a positive relationship between EO, MO, and LO and business performance (Cano, Carrillat and Jaramillo, 2004; Ellis, 2006; Lumpkin and Dess, 2001; Nynakk, 2012; Rauch et al., 2009), the results of prior research are mixed with some studies demonstrating a negative (Arbaugh, Cox and Camp, 2009; Grewal and Tansuhaj, 2001; Matsuno, Mentzer and Özsomer, 2002) and a curvilinear relationship (Tang et al., 2008; Wales et al., 2013). As demonstrated in the meta-analyses, the strength of this relationship also varies significantly across studies (Ellis, 2006; Rosenbusch, Rauch and Bausch, 2013; Saeed, Yousafzai and Engelen, 2014). This indicates that country-specific, institutional, and other business environment conditions may shape a firm’s strategic behavior and impact performance. Contextual differences have been recognized as a major source of inconsistency and study-to-study variation in research results (Johns, 2006) and called for a closer examination.

This study sets out to respond to the abovementioned calls for an integrative approach to and contextualization of firm-level strategic orientations. The main objective is to increase understanding of the role of strategic orientations for firm performance in different environmental contexts. The study focuses on entrepreneurial, market, and learning orientations, as well as their various combinations and their relationship with firm performance. Moreover, the study addresses contextual embeddedness of strategic orientations and examines environmental conditions that may affect the relationship between strategic orientation(s) and firm performance as well as the different contexts in which it occurs at both a country and industry level. The main research question of this study is as follows:

*When and under what conditions do strategic orientations individually and jointly relate to firm performance in different environmental contexts?*
To analyze different aspects relevant to the main research question, five separate sub-questions are formulated that correspond to the publications included in the dissertation. The first sub-question concerns separate individual and joint complementary effects of strategic orientations. In particular, the study seeks to identify the orientations, i.e., EO, MO, and/or LO, that represent the dominant explanation of variance when comparing their unique and shared effects upon firm performance, and to test complementary effects of these strategic orientations. Therefore, the first sub-question is as follows:

Sub-question 1: How do EO, MO, and LO individually and jointly (complementarily) contribute to explanation of variance in firm performance?

The following four sub-questions are related to the issue of contextualization of strategic orientations tapped from different aspects of country and industry environments. In particular, the contexts of economic crisis, institutional environment, developed and emerging markets, and organizational task environment are investigated. These contexts provide opportunities and constraints for firms and may shape the effectiveness of firms’ strategic orientations.

Among the investigated strategic orientations, as the scope of this dissertation encompasses SMEs EO is scrutinized more closely in this study. It is commonly recognized that with growth in size, organizations tend to be less entrepreneurially-oriented (McMillan, Block and Narasimha, 1986). Moreover, extant research has demonstrated that SMEs are motivated to constantly seek opportunities in order to survive and prosper (Chen and Hambrick, 1995). They are likely to adopt a more entrepreneurial behavior in turbulent or hostile environments (Real, Roldán and Leal, 2014), which is encouraged by their strategic flexibility and proximity to markets.

The context of economic crisis is addressed in the second sub-question. Economic crisis presents substantial challenges and creates new opportunities for firms striving to manage the economic downturn and grow their businesses. Because firms are limited in resources, particularly during an economic crisis, understanding how to best utilize such resources and capabilities is an important consideration in the pursuit of enhanced performance. Moreover, firms’ ability to operate within economic instability and perhaps even derive benefits from it provides a basis for achieving longer-term viability. Given the importance of a well-crafted strategy for crisis management, empirical studies are rarely addressing this issue (Bundy et al., 2017). This is apprehensible as economic crises are exogenous shocks that are not frequently encountered. During an economic crisis, industries and markets experience increased uncertainty and rapid environmental changes. These conditions inevitably influence firms’ decision-making processes, such as decisions on how to explore and exploit entrepreneurial opportunities and respond to market needs. Thus, a firm’s EO and MO may have particularly important roles during such economic downturns. EO and MO have also been emphasized to be complementary, an attribute that is meaningful to verify during a crisis. Thus, the aim is to gain a better understanding of performance effects of EO and MO, and their complementarity during economic crisis. Hence:
Sub-question 2: How do complementary strategic orientations relate to firm performance under economic crisis?

The third sub-question concerns examining the institutional context at the national level. Researchers have identified various institutions as important factors when investigating the prevalence and effectiveness of strategy across national contexts (Hoskisson et al., 2000). National-level institutions regulate access to critical resources that support business operations and determine the level of uncertainty in the surrounding environment (Li and Zahra, 2012); therefore, they may explain the differences in firms’ strategic behavior and performance outcomes across different countries. The effect of institutions seems particularly relevant for a firm’s EO as an organization’s exhibition of innovative, proactive, and risk-taking behaviors and the ability to derive benefits from them may be strongly influenced by a country’s formal and informal institutions (North, 1990). Empirical research related to this field has mostly focused on either cultural variables or the relationships between isolated elements of institutions. However, in reality, “institutions tend to ‘hang together’ as coherent entities or gestalts” (Fainshmidt et al., 2018, p. 308), and firms have to deal with all dimensions of the institutional environment. Therefore, the aim is to provide a comprehensive view on the impact of institutional diversity on the EO–performance relationship by adopting a more holistic theoretical foundation. Hence, the third sub-question is formulated as follows:

Sub-question 3: How do national-level institutions shape the EO–performance relationship?

In relation to the previous sub-question on EO across different institutional environments, the examination of EO in developed and emerging markets, which represents the distinctive institutional and cultural contexts, is addressed in the fourth sub-question. While studying the transition economies, the importance of institutions came to the forefront and was viewed to be far more than background conditions (Meyer and Peng, 2005; 2016). Compared to more mature economies, emerging markets are generally characterized by less developed institutional frameworks pertaining to laws and regulations, political environment, property rights protection, and often substitute deficiencies in the formal institutional infrastructure by relying on informal mechanisms (Hoskisson et al., 2000; Meyer and Peng, 2005). The unique characteristics associated with emerging markets can provide important boundary conditions for theories that have been developed in mature economies (Bruton et al., 2013). Like much of the empirical research, theoretical models of EO were primarily tested in developed countries, while research efforts in the emerging market contexts progressed at a slower pace (Wales, Gupta and Mousa, 2013). To provide a much needed comparative insight and more detailed examination of EO in developed versus emerging markets, this study investigates the role of separate EO dimensions for enhancing firm performance, which is affected by multiple industry characteristics. Hence:
Sub-question 4: What are the differences in the EO–performance relationship in developed and emerging market contexts?

The fifth sub-question concerns organizational task environment, which addresses firms’ interactions with important market players such as customers, competitors, and other stakeholders (Rosenbusch, Rauch and Bausch, 2013). Among the strategic orientations investigated in this study, EO has been recognized as a performance–variance-enhancing strategic orientation because exploratory activities and experimentation are generally more distant from a firm’s prior competences and entail more risks and uncertain outcomes (Wiklund and Shepherd, 2011). Hence, EO enhances chances for both success and failure, and its payoffs may markedly differ across market-specific conditions. A substantial amount of literature has explored an adjustment between firm’s EO and external environmental conditions (e.g., Boso, Story and Cadogan, 2013; Covin and Slevin, 1989; Lumpkin and Dess, 2001). Yet, for the hostility/munificence dimension of the environment, the research results are inconclusive with some studies suggesting that EO is positively related to firm performance in munificent environments (Kreiser and Davis, 2010), whereas others providing evidence for this relationship in hostile contexts (Covin and Slevin, 1989; Martins and Rialp, 2013). While previous studies have predominantly involved a consideration of separate environmental elements, this study aims to unpack these competing views by simultaneously considering how performance outcomes of EO are affected by a combination of multiple environmental parameters.

Sub-question 5: How is the EO–performance relationship contingent upon different dimensions of the organizational task environment?

1.3 Definitions and scope

This section presents a brief definition and understanding of the main concepts of this dissertation. This study focuses on the relationship between strategic orientations and performance in different environmental contexts. Strategic orientations are defined here as strategic behaviors implemented by a firm to ensure the firm’s performance (Deshpandé, Grinstein and Ofek, 2012). There are several key features of strategic orientation that have implications for the scope of this dissertation.

First, in this study, strategic orientations are investigated at the level of an individual firm. This level of analysis is related to how firms compete in the product-market segment. Accordingly, the theoretical issues at this level are related to strategic actions that are taken to provide value to customers and attain competitive advantage by efficiently deploying organizational resources. Strategic orientation defines a firm’s dominant competitive posture and characterizes how the firm sees competitive processes and approaches the competitive arena (Engelland and Summey, 1999). The decision to adopt strategic orientation is generally made at a firm’s headquarters, and the scope of strategic orientation implementation is usually firmwide. The scope of the analysis in the dissertation is limited to small and medium-sized enterprises, considered
in terms of their organizational size and/or market share that tends to empirically correlate. A standard international definition of SMEs does not exist, and SMEs are defined differently in legislations across countries depending on the size of the domestic economy.\(^1\) Furthermore, all of investigated firms are private and driven by profit maximization.

Second, strategic orientations are regarded primarily as behavioral phenomena, and behaviors are considered to be a core for defining strategic orientations. The exhibition of behavior should be persistent to some degree over time rather than occasional to infer the existence of strategic orientations (Covin and Lumpkin, 2011). Moreover, firms’ engagement in behavior is often associated with non-observable elements pertaining to a firm’s attitudes and certain cultural elements. In this sense, a firm’s strategic orientation encompasses the whole range of organizational activities, which involve planning, decision-making, and strategic management, as well as many aspects of the organizational culture, shared value systems, and corporate vision (Lumpkin and Dess, 1996).

Third, strategic orientations are employed to ensure the ultimate objective of the viability and performance of the firm. Being a multifaceted concept, firm performance has been measured in a variety of ways. In strategic orientation literature, both financial measures, such as firm’s growth and profitability, and non-financial measures, such as satisfaction and goal achievement, have been used. Sometimes, to form the composite performance measure, several indicators are applied. Performance can be assessed using objective data obtained from secondary sources, and subjective performance measures that reflect subjective assessment of key informants. In the empirical part of this dissertation, firm performance is measured using multiple approaches, and refers to self-estimated or self-reported financial performance, relative market performance, and crisis performance. For the literature review, as part of the theoretical development, empirical articles were used in which operationalization of firm performance varied from a range of financial to non-financial indicators, which were measured both objectively and subjectively.

Strategic orientation enables a conceptual classification of different patterns of strategic behavior based on key traits. This dissertation focuses on entrepreneurial, market, and learning orientations as three fundamental types of strategic orientations. Each of these represents a multidimensional strategic construct defined at the firm level. Entrepreneurial orientation refers to entrepreneurial strategic processes and firm-level behaviors. It is captured by the dimensions of innovativeness, proactiveness, and risk-

\(^{1}\)In the European Union, a SME is defined by a staff size of fewer than 250 employees, and turnover not exceeding 50 million euros or balance sheet total not exceeding 43 million euros. In Russia, SME is defined by a staff size of fewer than 250 employees, and turnover not exceeding 2000 million rubles (or 25 million euros). This study analyses SMEs as established firms that are different from startups, which are viewed as temporary organizations designed to search for a repeatable and scalable business model (Blank and Dorf, 2012). Generally startups are newly created and in a phase of development and search for markets, whereas SMEs run according to a fixed business model.
taking (Covin and Slevin, 1989) following the dominant way in which it is conceptualized within the entrepreneurship literature (Rauch et al., 2009; Rosenbusch, Rauch and Bausch, 2013). Although additional facets of EO have been suggested in the literature, these three dimensions are generally common among conceptualizations. *Market orientation* involves a firm’s behavior, which is driven by creating superior value for customers. It is described along the dimensions of customer orientation, competitor orientation, and interfunctional coordination (Narver and Slater, 1990). This conceptualization of MO completely captures the notion of providing customer value and accounts for other market players (i.e., competitors) and appears appropriate for the purpose of this study. *Learning orientation* refers to organizational values and behaviors pertaining to creation and usage of knowledge within the organization (Sinkula, Baker and Noordewier, 1997). Generally, it is understood within the dimensions of commitment to learning, shared-vision, and open-mindedness, which provide the intensity and direction for learning. EO, MO, and LO are regarded independently in the study, as well as interacting with each other, creating potential complementary effects. *Strategic orientation complementarity* is a beneficial interplay of the orientations in which the presence of one orientation increases the value of the other(s) (Ennen and Richter, 2010).

This dissertation contextualizes strategic orientations in different environments. Here, *context* refers to situational opportunities and constraints that shape organizational behavior and relationships between variables (Johns, 2006). While context is typically viewed as a setting, *contextualization* is a way to approach research in which knowledge of the settings to be studied is incorporated in the research design and implementation. This can vary from a description of settings to direct analysis of contextual factors and comparative studies (Rousseau and Fried, 2001). This dissertation studies the context of economic crisis, national-level institutional context, and industry context.

### 1.4 Structure of the study

The doctoral dissertation comprises an introductory part and five separate publications. Chapter 1 introduces the research background, research objective, and research questions, as well as outlines the scope and structure of the study. Chapter 2 presents the theoretical background of the research and the theoretical framework of the study.

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2Covin and Slevin’s (1989) definition of EO as a unidimensional (composite) construct comprising innovativeness, proactiveness, and risk-taking has been used in all publications apart from Publication IV, in which, for its purpose, EO is viewed in line with Lumpkin and Dess (1996) as a multidimensional construct, and performance implications are separately tested for each dimension (Hughes and Morgan, 2007).

3Narver and Slater (1990) and Kohli and Jaworski (1990; Kohli, Jaworski and Kumar, 1993) are two of the most extensively used characterizations and measures of MO. Although they are both theoretically consistent and widely adopted, the MO construct by Narver and Slater (1990) was applied in this dissertation due to its strong nomological link with customer value and higher reliability shown in previous research, whereas MO construct by Kohli, Jaworski and Kumar (1993) was noted to focus more heavily on information gathering and disseminating activities (Oczkowski and Farrell, 1998).
Chapter 3 describes the methodology and research design. Chapter 4 summarizes the publications and the results. Finally, Chapter 5 is devoted to the discussion of the results, contributions, and conclusions. The overview of the dissertation is followed by the five original publications. Each publication addresses a distinct research sub-question, and the introductory part summarizes the contributions of the individual publications as well as the overall results of the study for answering the main research question. Figure 1 shows the structure of the dissertation.

Main RQ:
When and under what conditions do strategic orientations individually and jointly relate to firm performance in different environmental contexts?

- **RSQ 1**: How do EO, MO, and LO individually and jointly (complementarily) contribute to explanation of variance in firm performance?
- **RSQ 2**: How do complementary strategic orientations relate to firm performance under economic crisis?
- **RSQ 3**: How do national-level institutions shape the EO–performance relationship?
- **RSQ 4**: What are the differences in the EO–performance relationship in developed and emerging market contexts?
- **RSQ 5**: How is the EO–performance relationship contingent upon different dimensions of the organizational task environment?

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Figure 1. Structure of the dissertation
2 Theoretical background

This chapter provides an overview of the theoretical foundations of the dissertation. It begins by introducing the state-of-the-art of strategic orientation concept and discussing its positioning in management literature. It further presents the concepts of different strategic orientation types – entrepreneurial, market, and learning orientations. Then, the current state of knowledge on the relationship between strategic orientations and firm performance is analyzed. Subsequently, contextual determinants of this relationship are discussed using different theoretical lenses. Finally, it discusses the theoretical framework of the study, which integrates multiple strategic orientations and contextualizes them into different country and industry settings.

2.1 State-of-the-art of strategic orientation concept

2.1.1 Historical overview

In this dissertation, strategic orientations are viewed as reflecting the “strategic behaviors implemented by a firm to create the proper actions for continuous superior performance” (Deshpandé, Grinstein and Ofek, 2012, p. 629–630). Because strategic orientation represents a firm’s behavior, one can judge how a firm orients itself by observing various activities in the marketplace. These activities are related to what scope to pursue, where to operate, and how to operate, and describe the firm’s strategic decisions in multiple domains (Lau and Bruton, 2011).

The concept of strategic orientation originated from a particular theoretical conceptualization and measurement of strategy. The term “strategic orientation” was introduced by Venkatraman (1989a) to denote a strategy that is defined within the following conceptual domain: is viewed as means (actions) to attain certain ends (goals), rather than treated as ends or as both ends and means; is defined at the business level; reflects a more holistic perspective on strategy rather than tapping only a part of it; and is viewed as ‘realized’ strategy rather than ‘intended’ one. According to Venkatraman (1989a), focusing on strategy in terms of means provides scope for a strategy such that its measures can be used to examine relationships between strategies and goals. Defining strategic orientation at the business level concerns how firms compete in product–market segments. As organizations increasingly diversify and get involved in multiple businesses, the corporate level seems to be too broad to understanding strategic responses to environmental influences. The functional level, which focuses on productivity within specified functions, appears to be narrow since strategic management aims to integrate key functions toward a general management perspective. A holistic perspective denotes a broader notion of strategy and goes beyond focusing on particular areas such as marketing or manufacturing, both of which do not truly reflect the overall strategic orientation of a firm. Finally, conceiving strategy as “realized” (Mintzberg, 1978) means focusing on organizational behavior without restricting research to the study of intentions of key strategists (Venkatraman, 1989a).
The measurement of strategic orientation was based on a comparative approach, which was aimed at identifying the key traits, or dimensions, of the construct. Strategic orientation was described using six dimensions: aggressiveness, analysis, defensiveness, futurity, proactiveness, and riskiness (Venkatraman, 1989a). The attractiveness of this approach is in its ability to provide finer comparisons by capturing differences in strategies along each underlying trait that is common to all firms compared to describing strategy verbally in its distinctive, holistic, and contextual form (narrative approach) or categorizing it into one particular cell of typology or taxonomy (classificatory approach).

However, after its initial conceptualization and measurement by Venkatraman (1989a), strategic orientation has received a wider meaning and is now commonly understood as a general, umbrella term to describe a number of different concepts such as technology orientation, innovation orientation, customer relationship orientation, brand orientation, employee orientation, and future orientation (e.g., Cadogan, 2012; Grinstein, 2008; Hakala, 2011; Ruvio et al., 2014; Sainio, Ritala and Hurmelinna-Laukkanen, 2012). Among different types of strategic orientations, entrepreneurial orientation (Covin and Slevin, 1989; Lumpkin and Dess, 1996), market orientation (Kohli and Jaworski, 1990; Narver and Slater, 1990), and learning orientation (Sinkula, Baker and Noordewier, 1997) have received extensive consideration in both theoretical and empirical literature. They can be viewed as general, overarching concepts that cover other more specific strategic orientations and are applicable to firms of different industries and scope of operations. These orientations have been initially conceptualized and examined in isolation. Currently, there is a growing interest toward inclusion of different orientations in one research model and analyzing their interrelationships (Hakala, 2011). EO, MO, and LO are the focus of this dissertation.

2.1.2 Strategic orientations in management literature

Strategic orientations and strategy

A multifaceted notion of a firm’s strategy can be approached from multiple perspectives. The strategy, defined by Chandler (1962), suggests determining long-term goals of an organization, and the adoption of actions and allocation of resources that are necessary to attain these goals. Based on this understanding, the strategy encompasses both goals and means and is viewed as an intended strategy.

When approached from a behavioral perspective, according to Mintzberg (1978), the strategy is viewed as a behavioral pattern or a stream of decisions, in which decisions refer to a firm’s commitment of recourses to action. When decisions exhibit consistency over a particular time period, the strategy is considered to have formed. This understanding views the strategy as a realized strategy and addresses the discussion on strategy formulation versus strategy formation (Mintzberg, 1978; Snow and Hambrick, 1980). Moreover, it accounts for both intended and emergent elements of strategy (Snow and Hambrick, 1980).
The behavioral view of strategy is very relevant for this dissertation when considering strategic orientations. From this perspective, strategic orientations are how a firm orients itself and they represent behaviors in and of themselves. Generally, it is considered that firms acting in certain manner have a corresponding strategic orientation.

**Strategic orientations, culture, and behavior**

In strategic orientations literature, there exists a discussion about whether strategic orientations are composed of cultural elements, representing organizational values, disposition toward behavior or attitudes held by leaders, a set of firm behaviors, or a combination of both (Miller, 2011). Culture has been understood as beliefs and expectations shared by a society, certain underlying structure of meaning that is persistent over time, and a traditional way of thinking, feeling, and reacting. According to Deshpandé and Webster (1989, p.4), organizational culture represents “the pattern of shared values and beliefs that help individuals understand organizational functioning and thus provide them with the norms for behavior in the organization.” Culture plays a significant role in firms because it defines not only who its relevant customers, suppliers, and employees are but also how the firm interacts with them (Barney, 1986). Thus, a firm’s attributes such as its structure and strategy are direct manifestations of cultural assumptions about the business (Barney, 1986).

A reflection of EO construct in the literature has focus on the discussion about its nature as a dispositional or a behavioral phenomenon (Covin and Lumpkin, 2011). Both conceptualizations are found in the literature such as EO as “a firm-level disposition” to engage in entrepreneurial behaviors (Voss, Voss and Moorman, 2005, p. 1134), as well as “a set of distinct but related behaviors” with entrepreneurial qualities (Pearce, Fritz and Davis, 2010, p. 219). According to Covin and Lumpkin (2011), because behaviors are defining attributes of entrepreneurial firms (Covin and Slevin, 1991) and a disposition does not guarantee entrepreneurial behaviors to be enacted, EO predominantly comprises sustained entrepreneurial behavioral patterns. However, non-observable elements pertaining to entrepreneurship should not be viewed as the focus of EO construct, but they can be associated with an exhibition of EO (Covin and Lumpkin, 2011). Anderson et al. (2015) proposed a conceptualization of EO as a joint exhibition of entrepreneurial behaviors (innovativeness and proactiveness) and a managerial attitude toward risk (risk-taking). Similarly, MO is also discussed within behavioral and cultural approaches as a set of behaviors or as a set of organizational values. According to Kohli and Jaworski (1990, p.6). MO is defined in terms of “specific activities” that are related to organizationwide generation and dissemination of market information and responsiveness. Deshpandé, Farley, and Webster (1993) assert that the sole focus on information about customer needs is insufficient without considering the deeply rooted values and beliefs that may encourage a customer’s focus. Narver and Slater (1990, p.21) describe MO as “the organization culture” and related it to characteristics such as customer orientation, competitor orientation, and interfunctional coordination. Moreover, they indicate that MO “creates the necessary behaviors” for creating superior
customer value and business performance and operationalize it through behavioral components that are manifestations of cultural values. For LO, it is often conceptualized based on Sinkula, Baker and Noordewier (1997, p.309) as “giving rise to that set of organizational values” that influence the degree to which a firm is engaged in knowledge-producing behaviors and proactive learning. Thus, LO pertains to a firm’s values and actions that revolve around commitment to learning, open-mindedness, and shared vision (Sinkula, Baker and Noordewier, 1997).

Therefore, a firm’s strategy-making process can be viewed as combining multiple aspects of organizational activities, as well as associated with an organization’s culture (Lumpkin and Dess, 1996). Thus, while this dissertation considers strategic orientations as having primarily behavioral elements, they are strongly linked to cultural values on the basis that an organization’s culture is demonstrated in the concrete behavior of its members.

2.2 The concepts of different strategic orientation types

2.2.1 Entrepreneurial orientation

*Entrepreneurial orientation* characterizes a firm’s entrepreneurial activities and decisions (Lumpkin and Dess, 1996). EO concept is based on discussions in strategic management literature about the entrepreneurial mode of strategy-making, entrepreneurial management style, and entrepreneurial firms and their key attributes that distinguish them from non-entrepreneurial firms (Khandwalla, 1976/1977; Miller, 1983; Mintzberg, 1973). EO is most commonly described along the dimensions of innovativeness (experimentation and creation of new products, process, and business models), proactiveness (actively entering new product/market segments before competitors and anticipating future demand), and risk-taking (a willingness to contribute resources to projects with uncertain outcomes) (Anderson et al., 2015, Covin and Slevin, 1989). Moreover, an extended conceptualization includes the dimensions of autonomy (independent action of individuals/teams for developing ideas and carrying them to completion) and competitive aggressiveness (a propensity to intensely challenge competitors for achieving entry and improving market position) (Lumpkin and Dess, 1996). EO describes a firm’s tendency to experiment, generate new ideas, commercialize them into new products and services ahead of competitors, make substantial investments in research and development, and take business-related risks (Lumpkin and Dess, 1996; Vij and Bedi, 2012). Entrepreneurial firms engage in the development of innovations and embrace forward-looking and somewhat risky projects (Rauch et al., 2009).

EO can be conceptualized with either a unidimensional or a multidimensional approach. A unidimensional or composite view of EO considers its dimensions to be closely related to each other and asserts that firms can be viewed as entrepreneurial only when they have high levels of all EO dimensions (Covin and Slevin, 1989). In contrast, a
2.2 The concepts of different strategic orientation types

The concepts of different strategic orientation types consider EO dimensions to be independent and not necessarily correlated with each other. It regards firm to be entrepreneurial even if all the EO dimensions have not been manifested (Lumpkin and Dess, 1996). As indicated by Covin and Lumpkin (2011), none of these conceptualizations is superior to the other. Both of them can provide significant contributions to the EO knowledge base.

EO can be compared to similar concepts in entrepreneurship literature such as corporate entrepreneurship, which involves engaging in intrapreneurial activities (entrepreneurship within existing organizations) such as corporate venturing and self-renewal (Antoncic and Hisrich, 2001); small business orientation, which reflects the emotional relationship of the owner to the business (Runyan, Droge and Swinney, 2008); and strategic entrepreneurship, which captures a firm’s efforts to balance between opportunity-seeking behavior (i.e., exploration) and advantage-seeking behavior (i.e., exploitation) (Ireland, Hitt and Sirmon, 2003). EO provides a conceptual framework for exploring organizationally relevant phenomenon and manifests in firms through entrepreneurial processes and behavior (Wales, Gupta and Mousa, 2013).

2.2.2 Market orientation

Market orientation characterizes a firm’s strategic behavior directed at creating superior value for customers. The concept of MO is based on the marketing concept (Webster, 1988), which denotes a business philosophy that recognizes a necessity for comprehensively understanding customer needs and preferences, and offering products and services using this understanding. The term “market orientation” was used by Kohli and Jaworski (1990) to indicate the implementation of the marketing concept, which was reflected in a firm’s activities and behaviors. Firms whose actions are consistent with the marketing concept have been referred to as market-oriented firms.

In the literature, two conceptualizations of MO are prevalent. The first conceptualization describes MO to be related to organization-wide generation of market intelligence pertaining customer needs, both expressed and latent, as well as factors that influence them; dissemination of market intelligence horizontally and vertically across departments; and accompanying organizational responsiveness that is aimed at meeting customer needs, including the choice of target markets, and the strategy for product development and promotion (Jaworski and Kohli, 1993; Kohli and Jaworski, 1990; Kohli, Jaworski and Kumar, 1993). The second conceptualization considers MO along the dimensions of customer orientation (understanding target customers to create superior value for them), competitor orientation (understanding strengths and weaknesses as well as capabilities and strategies of key competitors), and inter-functional coordination (coordinated integration of firm’s resources to create superior customer value) (Narver and Slater, 1990). While these conceptualizations describe MO along different dimensions and measurement scales, both are concerned with the focal understanding of MO, which places customers at the forefront when making strategic decisions. MO describes the direction of all departments of a firm to the market, as well as the willingness and ability to create superior customer value, analyze competitive
environment, and meet market demands (Kirca, Jayachandran and Bearden, 2005). Overall, market-oriented firms engage in understanding target customer needs and provide solutions that are superior compared to the offerings of their main rivals (Ellis, 2006).

MO is similar to other concepts in marketing literature. Sometimes, MO is used interchangeably with customer orientation and marketing orientation, e.g., Deshpandé, Farley and Webster (1993) used the term customer orientation instead of market orientation. They considered the terms to be synonymous and referring to the same concept, with the term “market” defined as a set of all potential customers of a firm. These concepts are also differentiated, and, according to Slater and Narver (1999), market-oriented business is more than just being customer-led. They suggest that the latter is generally more concerned with expressed customer needs, while the former addresses both expressed and latent needs of customers. Similarly, Jaworski, Kohli and Sahay (2000) consider MO as both market driven and market driving. MO involves scanning the market broadly and monitoring competitors’ strategies and other stakeholders, and can be viewed as a wider concept with customer orientation being one of its constituent components (Narver and Slater, 1990). Subtle differences have emerged in the literature for MO and marketing orientation. Kohli and Jaworski (1990) consider the label MO to be more preferable as it focuses attention on markets and clarifies that the construct is a concern of a variety of departments at an organization, and not exclusively of the marketing function.

2.2.3 Learning orientation

Learning orientation characterizes organizational values and behaviors that influence firm’s propensity to create and use knowledge (Sinkula, Baker and Noordewier, 1997). LO represents the degree to which organizational learning and knowledge integration can occur at a firm and existing assumptions and beliefs can be questioned. Garvin (1993, p. 80) defined a learning organization as one that is “skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights”. Building on the work of Nystrom and Starbuck (1984) and Senge (1990), Argyris (1994) focused on to the importance of questioning currently held assumptions and managerial “anti-learning,” which becomes especially valuable when environmental conditions change.

LO is commonly conceptualized with the dimensions of commitment to learning (the degree to which a firm places value on learning and promotes a learning culture), shared vision (the unity of purpose and agreement with the direction that the organization is taking), and open-mindedness (the readiness to question long-held assumptions, beliefs and practices, and accept new ideas) (Sinkula, Baker and Noordewier, 1997). More broadly, an additional dimension of intra-organizational knowledge sharing has been analyzed (Calantone, Cavusgil and Zhao, 2002). While commitment to learning and open-mindedness describe the intensity of learning, shared vision provides the direction of learning. LO is related to a firm’s ability to critically reflect on the basic assumptions
2.3 Strategic orientations and firm performance

about customers and the marketplace and unlearn from existing practices. Overall, learning-oriented firms engage in learning from external and internal environments, promote the development of learning culture and common organizational vision across all departments, and continuously question assumptions and beliefs about the way of doing business and understanding markets and environments. If considering all the dimensions together, LO focuses on a firm’s understanding of how things are done, often referred to as its “theory in use” (Argyris and Schön, 1978), as well as updates it to respond to changes in the environment.

LO can be compared to similar concepts in management literature such as organizational learning (Huber, 1991) and organizational renewal. Organizational learning describes a process involving different stages of knowledge acquisition, distribution, interpretation, and organizational memory (Huber, 1991). Knowledge can be created at different levels such as individual, group, and organizational, and facilitate behavioral change (Slater and Narver, 1995). Organizational renewal reflects the transformation of organizations and has strategic and organizational change connotations. Renewal harmonizes continuity and change in a firm, and according to Crossan, Lane and White (1999), organizational learning can be viewed as a principle means of achieving strategic renewal. Compared to these concepts, LO captures organizational propensity and actions to learn and adapt, and may influence the extent to which a firm develops its organizational learning (Real, Roldán and Leal, 2014) and renews.

2.3 Strategic orientations and firm performance

The prevailing direction of research on strategic orientations is investigating their relationship with firm performance. Previous studies are generally consistent in positive performance effects of EO (Lumpkin and Dess, 2001; Rauch et al., 2009), MO (Cano, Carrillat and Jaramillo, 2004; Ellis, 2006) and LO (Calantone, Cavusgil and Zhao, 2002; Nybakk, 2012). In the strategic orientations literature, performance is often measured using financial measures, non-financial measures, or both. However, the SO–performance relationship is possibly more complex compared to a universal effect model, and studies rely on contingency models. In this dissertation, the contingency perspective is used as a common theoretical perspective that frames individual publications examining complementarity (internal contingencies) and contextualization (external contingencies) of strategic orientations.

2.3.1 Contingency theory

Identification of effective management practices is the primary focus of management research. The attempts to specify the “one best way” to solve managerial problems within classical management theory were challenged because of their incapability to completely capture the complexity of organizations (Boyd et al., 2012). Unlike advocating a set of universal or generic principles, a contingency perspective suggests
that there is no one best way to organize and manage, and that the appropriate style of behavior is not equally effective under all conditions, but rather depends on specific situations. Consequently, researchers have generally focused their attention on exploring “middle range” relationships that are held within a particular context (Ginsberg and Venkatraman, 1985). After the landmark studies of Burns and Stalker (1961), Lawrence and Lorsch (1967) and Thompson (1967), contingency hypotheses have become popular in management studies. The contingency theory views organization as an open system interacting with its environment. It proposes that organizational performance is a result of the fit between external environmental demands and internal arrangements (Van de Ven, Ganco and Hinings, 2013).

The notion of fit is central to contingency perspective. The idea of “matching” or “aligning” organizational resources with environmental opportunities and threats was emphasized in the field of business policy (Andrews, 1971), and being dominant in the parent disciplines, particularly in organization theory, the concept of fit assumed significance when developing and testing theories of strategy (Venkatraman and Camillus, 1984). Improving internal fit among key components of organizational structure, strategy, process and culture, and external fit between the organization and the environment possibly leads to improved performance.

After a burst of conceptual and empirical work in the 1960s–1980s, traditional contingency theory was subjected to several criticisms for a variety of methodological and theoretical issues such as its deterministic assumptions, reductionism, conceptual weakness of variables, and the lack of specificity of relationships between them (Tosi and Slocum, 1984). Because of these limitations, multiple additions to contingency thinking were proposed. In particular, Drazin and Van de Ven (1985) indicated that during the development of the contingency theory, three different approaches to fit have emerged, i.e., the selection, interaction, and systems approaches, where the latter addresses simultaneously multiple contingencies. Contingency hypotheses have become increasingly prevalent over the last decades, indicating the development of more nuanced hypotheses (Boyd et al., 2012). Configuration and complementarity perspectives are among the recent perspectives that focus on the ideas of contingency theory but avoid the pitfalls of early research (Van de Ven, Ganco and Hinings, 2013). Common to these models is the proposition that performance is enhanced by achieving internal and external fit. The configuration perspective characterizes the holistic patterns of interdependencies among organizational and environmental variables (Meyer, Tsui and Hinings, 1993). An emerging literature on organizational complementarities suggests a high interdependence among a set of factors that jointly produce positive effects on performance (Milgrom and Roberts, 1995).

In this dissertation, contingency theory represents a theoretical point of departure for analyzing multiple strategic orientations in different environmental contexts. The internal fit between EO, MO, and/or LO is viewed further from the complementarity perspective. Subsequently, for assessing the external fit, strategic orientations are
2.3 Strategic orientations and firm performance

contextualized in different contexts, which are either directly observed or viewed broadly as research settings.

2.3.2 Multiple strategic orientations – complementary effects

EO, MO, and LO have been considered to serve as sources of a firm’s competitiveness and found to exert positive performance effects because of their inherent characteristics (Gnizy, Baker and Grinstein, 2014). In particular, EO helps the organization focus on identifying and capitalizing on emerging business opportunities, anticipating future needs, and creating new products ahead of competitors (Wiklund and Shepherd, 2011). MO describes continuous collection of information about customers’ needs and competitors’ capabilities, and creation of superior value for customers (He and Wei, 2011; Slater and Narver, 1995). Firm’s LO is beneficial for efficient creation and usage of knowledge, learning from previous experience, and critical evaluation of basic assumptions about the business to remain relevant with changes in the external environment (Calantone, Cavusgil and Zhao, 2002).

Although, EO, MO, and LO each have been shown to be factors of enhanced firm performance, recent studies have adopted an integrative approach to strategic orientations, rather than consider different orientations in isolation (Dutta, Gupta and Chen, 2016), in order to examine their relative effects (Kropp, Lindsay and Shoham, 2006; Laukkanen et al., 2013) and potential combinatorial impacts (Gnizy, Baker and Grinstein, 2014; Rhee, Park and Lee, 2010) on a firm’s outcomes. Firms may operate with multiple strategic orientations, and relying only on one may create temporary, not sustainable, competitive advantage (Atuahene-Gima and Ko, 2001). Therefore, studies have focused on joint effects and complementarities between EO, MO, and/or LO (Hakala, 2011; Ho, Plewa and Lu, 2016) as sources of enhanced performance.

The term “complementarity,” derived from the Latin meaning “to fill up” (Ennen and Richter, 2010), is generally related to the idea that value creation is possible by combining multiple different factors. In economics, the notion of complementarity was introduced by Edgeworth (1881): complementarity exists when marginal returns from one variable increase in the level of the other variables. Complementarity was further approached formally using the mathematical term of supermodularity, which denotes that “the gain from increasing every component…is more than the sum of gains from the separate individual increases” (Milgrom and Roberts, 1994, p. 5), and provides a way to formalize the idea of synergies and systems effects that “the whole is more than the sum of its parts” (Milgrom and Roberts, 1995, p.184).

Recently, the concept of complementarity has gained considerable attention in organization and strategy research. It became particularly prominent in the literature on organizational configurations (e.g., Miller and Friesen, 1984) in which it was commonly used interchangeably with fit between organizational strategy, structure, and contextual factors (Ennen and Richter, 2010). Furthermore, the idea of the role of complementary assets in innovation (Teece, 1986) provided the ground for later empirical studies on the
importance of a firm’s ability to integrate multiple different resources in unique ways (Adegbesan, 2009). Overall, different approaches have highlighted that certain elements may exert more value only in the presence of other factors (Ennen and Richter, 2010).

In this dissertation, complementarity refers to a beneficial interplay of factors where the presence of one factor increases the value of the other(s) (Ennen and Richter 2010; Voss, Godfrey and Seiders, 2010). Complementary factors reinforce each other in way that an increase in one of them increases the effect of investments in another; thus, such factors are more valuable in combination than separately (Song et al., 2005). Some examples include the beneficial interplay between marketing and technology resources (Song et al., 2005), diversification strategies (Tanriverdi and Lee, 2008), or alliance formation (Chung, Singh and Lee, 2000). Unlike complementarity, substitutability denotes competing relationship when the presence of one factor, contrarily, diminishes the effect of another (Ennen and Richter 2010). For example, such a relationship has been shown to occur between relatively similar factors such as resources or skills in similar fields (Nerkar and Roberts, 2004).

In the research on strategic orientations, several studies have examined the relationship between EO, MO, and/or LO (e.g., Boso, Story and Cadogan, 2013; Ho, Plewa and Lu, 2016). These strategic orientations have been observed to be closely interrelated. In particular, EO focuses more on innovative products-markets, which could entail uncertainties and high risk of market failure. MO alone focuses more on current markets, which may de-emphasize new innovative opportunities; hence, the adaptiveness of MO to the current markets can be combined with the explorative nature of EO (Atuahene-Gima and Ko, 2001; Boso, Story and Cadogan, 2013; Slater and Narver, 1995). Both MO and EO are related to LO such that the former gathers information externally from the market, whereas the latter obtains knowledge internally via experimentation. Moreover, LO adds the constant examination of the quality of information collection, interpretation, and storage, as well as the validity of dominant logic that guides the entire process (Baker and Sinkula, 1999). Overall, because of their characteristics, EO, MO, and/or LO have been proposed to complement each other in their effect on firm performance (e.g., Gnizy, Baker and Grinstein, 2014; Ho, Plewa and Lu, 2016). Table 1 summarizes prior research on the relationship between EO, MO, and/or LO, and firm performance by focusing on the conceptual and methodological approaches for establishing underlying relationships. The different integrative models of these strategic orientations, which have been previously investigated by researchers, are differentiated.

Table 1. Integrative models of EO, MO, LO, and performance

<table>
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<tr>
<th>Model</th>
<th>Description</th>
<th>Summarized results</th>
<th>Exemplary studies</th>
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<tr>
<td>Individual parallel effects of EO, MO, and/or LO on</td>
<td>Strategic orientations are viewed as alternatives and not interacting with each</td>
<td>EO, MO, and LO mostly reveal positive association with performance, including</td>
<td>Baker and Sinkula (2009); Hult, Hurley and Knight (2004); Hult, Snow and</td>
</tr>
</tbody>
</table>
Despite the growing research interest towards investigating EO, MO, and/or LO using different approaches to model their relationships, the existing analytical approaches are limited in their ability to provide evidence of the amount of orientations’ unique and shared contributions to variation in firm performance, as well as their comparison.
Furthermore, most studies examine two orientation types; however, such a comparison is more demonstrative when including all the three fundamental strategic orientations in the model, which remains rare in previous research (Hakala, 2011). These gaps are addressed in the study on individual and joint effects of EO, MO, and LO, and the partitioning of their explanatory power using a commonality analytical technique, included in this dissertation (Publication I). Furthermore, literature reviews on complementarities in general (Ennen and Richter, 2010) and strategic orientations’ interaction in particular (Hakala, 2011) underline the need to carefully account for contextual factors as it is difficult to argue for factors that would always be complementary. Addressing this inquiry, Publication II examines how the synergistic effect of EO and MO, often observed in the literature in stable environments (e.g., Boso, Cadogan, and Story, 2012; 2013), is related to firm performance during an economic crisis.

2.4 Contextualizing strategic orientations–performance relationship

2.4.1 Context and its dimensions

Over the last decades, numerous appeals have appeared in the literature for greater consideration of context in management research (Bamberger, 2008). Economic behavior has been increasingly recognized to be better understood within its temporal, spatial, social, and institutional contexts because these contexts provide opportunities and set boundaries for organizational actions (Welter, 2011). A range of contextual variables may influence various decisions made at an organization and the results of those decisions (Zahra, Wright and Abdelgawad, 2014). Contextualization indicates somewhat narrowing the research focus and focusing on observing and explaining phenomena in particular, specified contexts. Such accounting for the role of context has a potential to result in more precise models and robust theories, which will capture the increasing complexity of the phenomena and set boundaries to relationships. Moreover, it provides finer interpretation of results and increases their real-world relevance and applicability (Bamberger, 2008; Rousseau and Fried, 2001).

Furthermore, contextual differences can be a major source of study-to-study variation in research results (Johns, 2006). In particular, anomalous research findings, null findings, reversed causal arrows, opposed signs between variables, or curvilinear relationships are frequent products of context effects (Johns, 2006). This observation is relevant to strategic orientations research, within which, despite a broad documentation of the positive EO, MO, and LO effects on firm performance, the strength of this relationship varies significantly across studies (Saeed, Yousafzai and Engelen, 2014). Moreover, an empirical evidence of non-significant, negative, and nonlinear relationships also exists (e.g., Arbaugh, Cox and Camp, 2009; Grewal and Tansuhaj, 2001; Lam et al., 2011; Tang et al., 2008). Such inconsistencies across studies require a closer examination of research settings and incorporation of contextual elements while investigating the strategic orientations-performance relationship.
2.4 Contextualizing strategic orientations–performance relationship

The term “context,” derived from the Latin meaning “to knit together” or “to make a connection” (Rousseau and Fried, 2001), emphasizes the holistic nature and relationships between individual parts and the whole. Contextualizing entails connecting observations to a set of relevant events, facts, or viewpoints that form part of a larger whole (Rousseau and Fried, 2001). In this dissertation, context is viewed in line with Johns (2006, p.386) as “situational opportunities and constraints that affect the occurrence and meaning of organizational behavior as well as functional relationships between variables”. Typically, it refers to settings, environments, circumstances, or situations surrounding the phenomenon, which either enable or constrain it (Welter, 2011). Context manifests itself in different facets such as a salience of situational features, which predisposes potential contextual impact; a situational strength, varying in capacity to abet or constrain behavior; a cross-level effect when situational variables at one level of analysis have an impact on variables at another level; a configuration or bundle of stimuli when a set of factors, considered together, show more interpretable patterns that one factor alone would not be able to depict; an event or happening; a shaper of meaning underlying organizational behavior; or a constant (Johns, 2006).

Context has various dimensions and spreads across different levels of analysis. Johns (2006) distinguishes between omnibus and discrete dimensions of context, in which the former refers to a broadly considered context that describes who, what, when, where, and why, whereas the latter indicates particular contextual variables that impact directly behavior or shape relationships between variables. A discrete context can be viewed as embedded within omnibus context such that the effect of omnibus context is indirectly manifested by discrete contextual variables. Welter (2011) and Zahra, Wright and Abdelgawad (2014) considered temporal, organizational, business or industry, social, spatial, and institutional contexts. Rousseau and Fried (2001) proposed three tiers of contextualization, which included a rich description of the role of context, direct observation and analysis of contextual factors, and comparative studies. They also noted that the degree of contextualization to select from depends on the research question and the nature of settings observed.

Considering the multifaceted nature of context, this dissertation explores the role of different dimensions and levels of context in the relationship between strategic orientations and firm performance. In particular, it investigates the temporal context of economic crisis, in which time defines the value and breath of opportunities and risks; national-level institutional context that creates differences in formal and informal institutions as well as developed and emerging markets; and industry context that imposes variations in the task environment in terms of dynamism, heterogeneity, hostility, and munificence. In different publications, the context is viewed as an event, a cross-level effect, and a configuration of situational factors; and it is approached via description, direct observation, and comparative analysis. While different dimensions of context are investigated in this study, the following sections focus on theoretical approaches that were applied for studying strategic orientations within these contexts.
2.4.2 Economic crisis context

The context of economic crisis describes a period of unexpected and unfavorable shift in the macroeconomic environment, which creates intense difficulties, emerging troubles, or new threats for organizations (Vaaler and McNamara, 2004). Generally, a crisis occurs when there is a major threat to a system’s survival, with little time to react, and the threat is unanticipated (Hermann, 1963). Crises and crisis management have been studied in a number of disciplines to understand how and why crises occur, how organizations respond to them, and clarify the important outcomes of crises (Bundy et al., 2017). Crisis management broadly captures managers’ behavior at all stages of crisis, among which organizations’ actions in response to a crisis is a predominant area of research (Bundy et al., 2017).

Although commonly viewed in terms of threats, economic crisis also represents potentially beneficial opportunities for firms (Bao, Olson and Yuan, 2011), and this dissertation combines both these views. In this vein, a crisis can be regarded as a particular example of an environmental jolt, defined as a sudden and unprecedented event that has a dramatic, disruptive, and potentially inimical character (Meyer, 1982). Environmental jolts are ambiguous events and, in addition to threats, they offer propitious opportunities. Moreover, a crisis can also serve as a cause of a turnaround situation of organizational stagnation or decline in which crucial firm’s goals cannot be met anymore and a turnaround has to be undertaken to ensure survival and competitiveness in the future (Hofer, 1980; Robbins and Pearce II, 1992). Crises substantively influence organization’s viability and performance; they imply the need to take rapid strategic actions. The responses are generally grouped into externally versus internally directed actions (Chattopadhyay, Glick and Huber, 2001), offensive (i.e., revenue generating) versus defensive (i.e., cost or asset reducing) strategies (Bao, Olson and Yuan, 2011; Tan and See, 2004), or proactive versus reactive strategies (Alonso-Almeida, Bremer and Llach, 2015).

A number of theoretical frames inform research on crisis management (Bundy et al., 2017). Within research on organizational adaptation to environmental changes, Staw, Sandelands and Dutton (1981) offered the “threat-rigidity” effects to explain how individuals, groups, and organizations responded to adverse environmental conditions. They posited that organizations become rigid when faced with economic adversity or threats because of restrictions on information processing, constriction of control, and conservation of resources. Organizations tend to constrain their strategic actions and intensify concerns about efficiency, which is manifested in budget tightening, cost cutting, and ensuring accountability. However, these threat-rigidity effects can be maladaptive, and, when the environmental changes are radical, flexibility and diversity have more survival value (Ritala, Heiman and Hurmelinna-Laukkonen, 2016; Staw, Sandelands and Dutton, 1981). Unlike previous presumptions about sudden environmental changes placing organizations in jeopardy, Meyer (1982) identified that sudden changes are ambiguous events that also benefit organizations; the term “jolt” was used to distinguish external events from their disparate interpretations. Because
Environmental changes are often ambiguous, interpretations that executives make of environmental changes, such as being either threats or opportunities, play a large part in organizational actions (Chattopadhyay, Glick and Huber, 2001).

Strategic management research focuses on the concept of business turnaround to address the issue of adverse situations and organizational decline (Hofer, 1980; Robbins and Pearce II, 1992; Pearce II and Robbins, 1993; Schendel, Patton and Riggs, 1976). Schendel, Patton, and Riggs (1976) and Hofer (1980) suggested that the nature of a turnaround situation strongly influences the type of turnaround response such that strategic responses should be linked to strategic causes and operating responses should be linked to operating causes. The failure to identify an appropriate turnaround strategy may lead to the dissipation of organizational resources and energy into nonproductive or even destructive efforts (Hofer, 1980). Robbins and Pearce II (1992) distinguished between the two different stages in turnaround response: retrenchment, which is aimed at stabilizing declining performance, and recovery, which is aimed at stimulating financial improvement. Similarly, in their model of turnaround process, turnaround response is matched to turnaround situation. It is proposed that dominant internal causes of decline call for efficiency dominant strategies; however, dominant external causes match entrepreneurially dominant strategies (Robbins and Pearce II, 1992). Furthermore, the empirical investigation of turnaround strategies in economic crisis has shown higher performance among firms adopting long-term, proactive strategies compared to those applying short-term actions for day-to-day survivability (Alonso-Almeida, Bremer and Llach, 2015; Laitinen, 2000; Pearce II and Michael, 1997).

Economic crisis served as a research context for a few of studies on strategic orientations (e.g. Grewal and Tansuhaj, 2001; Marino et al., 2008; Naidoo, 2010). Some turnaround strategies resemble very closely strategic orientations such as EO (Soininen et al., 2012b). Because of their forward-looking nature, strategic orientations may impact the manner in which economic crisis is framed by firms (Marino et al., 2008), and represent relevant approaches in terms of matching the externally caused turnaround situation. However, prior studies are fragmentary and have yielded mixed results. For example, Soininen et al. (2012b) revealed that operations of innovative and proactive firms are less affected by recession, whereas taking risk is less beneficial for profitability. Lettice, Tschida and Forstenlechner (2014) showed that MO helps to withstand increased environmental turbulence during a crisis, while Grewal and Tansuhaj (2001) observed its negative effect. Furthermore, there is a need to explore multiple strategic orientations during a crisis to advance knowledge in this research field (Huhtala et al., 2014). Thus, the study of EO and MO in the context of economic crisis, which is included in this dissertation (Publication II), is an attempt to address these limitations.

### 2.4.3 Institutional context

The institutional context is based on the concept of institutions and includes influences from state, society and culture on human behavior. Institutions commonly refer to the
“rules of the game,” or constraints that structure human interaction (North, 1990, p.3). These constraints can be both formal, i.e., political and economy-related laws and regulations, as well as informal, i.e., cultural norms, values, and societal attitudes. Similarly, institutions can be viewed as regulative, normative and cognitive structures and activities that provide meaning and stability to social behavior (Scott, 1995, p.33). While terms and labels differ, schemes of broadly dividing institutions are complementary and focus on different aspects (Bruton, Su and Filatotchev, 2018; Peng et al., 2009).

Institutional theory is presented in two branches, i.e., economics/political science branch (Bonchek and Shepsle, 1996; North, 1990) and sociology/organizational theory branch (DiMaggio and Powell, 1983; Meyer and Rowan, 1991; Scott, 1995). The economic/political science branch mostly focuses on rules developed by the government; thus, it emphasizes on the “exogenous aspect” of institutional theory (Bruton, Su and Filatotchev, 2018). Moreover, it focuses more on the efficiency and suggests that the role of institutions in the economy is to reduce transaction costs by reducing uncertainty and building stable structures that facilitate interactions (Hoskisson et al., 2000). In contrast, the sociology/organization theory branch focuses on how individuals and organizations behave in relation to societal norms; thus, it focuses on norms as important institutions (Bruton, Ahlstrom and Li, 2010; Scott, 1995) and highlights the “endogenous aspect” of institutional theory (Heikkila and Isett, 2004). Moreover, it focuses more on legitimacy and how individuals and organizations act in relation to social expectations and secure their positions by conforming to different norms in the institutional environment. Being substantively different, both these branches share a common interest in understanding the bases of stability in a society and view individuals to be “boundedly rational” in decision-making and motivated to comply with external social pressures (Bruton, Su and Filatotchev, 2018). Based on the relevant insights of institutional theory, this dissertation seeks to obtain a more comprehensive picture of the role of different facets of institutional context in organizational behavior. The institutional context refers here to rules, norms, and beliefs that influence organizations and vary widely across countries.

The institutional perspective, which is also labeled as institution-based view when applied to strategy research (Peng, 2002; Peng et al., 2009), emphasizes dynamic interactions between institutions and organizations. It considers that strategic choices that firms make are not only determined by industry settings and firm capabilities but also affected by formal and informal constraints of a particular institutional context. Organizations are embedded within broader social structures comprising different institutions that significantly influence strategic decision-making. Therefore, institutional forces can provide a better understanding of differences in various types of strategies and the performance outcomes of these strategies (Peng et al., 2009). A solid body of research has examined the institutional context for strategic behavior such as entry mode choice (Meyer et al., 2009) and product diversification (Peng and Delios, 2006). Institutional theory is an increasingly utilized theoretical perspective for entrepreneurship research in general (Bruton, Ahlstrom and Li, 2010; Manolova, Eunni
and Gyoshev, 2008; Welter and Smallbone, 2011), and EO in particular (Lindsay et al., 2014; Saeed, Yousefzai and Engelen, 2014). Institutional environment creates and limits entrepreneurial opportunities and risks as well as determines the boundaries of acceptable strategic actions, the process of gaining legitimacy, and payoffs that society offers to entrepreneurial activities. Thus, an institutional environment can provide a substantial value in explaining a firm’s entrepreneurial behavior and performance prospects (Manolova, Euni and Gyoshev, 2008). Despite its importance, prior studies are fragmentary and have predominantly emphasized cultural effects (Semrau, Ambos and Kraus, 2016) with considerably less focus given to the holistic nature of institutional context (Pezeshkan et al., 2016; Salimath and Cullen, 2010). Moreover, previous empirical studies have often focused on single countries; this makes it difficult to judge the impact of institutions and points out to a need to consider wider regions and conduct comparative research (Bruton, Ahlstrom and Li, 2010).

To account for a comprehensive set of national level institutional factors, this dissertation draws upon the national business systems (NBS) framework (Whitley, 1999; 2002). Based on economic and sociological perspectives, this multi-faceted framework distinguishes between four major categories of institutional factors, i.e., the legal system, financial system, education system, and normative relations (Lim et al., 2010; Whitley, 1999), which differentiate business systems and determine economic decision-making, and thereby a range of organizational- and country-level outcomes. Owing to their impact on relationships between firms and their primary stakeholders, e.g., capital, labor and the state, these institutions are critical for a firm’s behavior (Ioannou and Serafeim, 2012) and for understanding the efficacy of a firms’ strategic orientation while pursuing performance within a country. A global multi-country study on EO, which is included in the dissertation (Publication III), presents the institutional perspective to examine performance consequences of EO by applying the conceptualization of a country’s institutional environment in the form of NBS.

Furthermore, institutional theory presents a preeminent theoretical lens when investigating a firm’s strategy in emerging markets (Hoskisson et al., 2000). This is because institutional structures in emerging economies can significantly vary compared to those in mature economies; moreover, government and societal influences have typically stronger influences (London and Hart, 2004). Studies related to non-Western economies have clearly demonstrated that institutions matter and are able to provide insights for emerging economies, and thus should not be taken for granted (Peng, 2002). In this dissertation, the role of institutional environment is discussed in the comparative examination of EO and firm performance in the emerging market as compared to the developed one (Publication IV).

2.4.4 Industry context

In addition to macroeconomic and institutional contexts, business conditions differ across various industries and markets for a given country. Typically, the environment has been discussed in contingency theory using a task environment that immediately
surrounds organizations and addresses how they interact with customers, competitors, suppliers, and other stakeholders (Rosenbusch, Rauch and Bausch, 2013). The task environment affects decisions, actions, and performance of organizations and it offers a relevant perspective using a multidimensional conceptualization of the environment. Dess and Beard (1984) proposed three key dimensions of a firm’s task environment: munificence, complexity, and dynamism. Munificence refers to environmental support for a firm, and its opposite side, i.e., hostility, presumes a variety of threats to a firm’s survival such as lack of business opportunities, competitive intensity, scarcity of labor and material resources, and pervasive governmental regulations. Complexity describes the level of environmental heterogeneity, which implies that firms operate within a variety of markets and inputs while producing a variety of outputs. Dynamism refers to the intensity and unpredictability of changes in the environment, which are related to market volatility, shifts in demand, consumers’ tastes, competitor’s behavior, and technological development (Miller and Friesen, 1982). Firms operate within their close industry context, and the specific conditions related to these environmental dimensions have a substantial impact on their behavior; and the fit among these is an important condition for business performance (Venkatraman and Camillus, 1984).

The concept of fit, based on the contingency theory tradition (Lawrence and Lorsch, 1967), is considered fundamental to strategy research. A call for contingency-based empirical research on strategy (Hofer, 1975) required investigation of the role of a variety of influences on strategy and performance in terms of bi-variate relationships and further arriving at more complicated configurations. These examples include connecting competences and resources in various internal domains such as achieving congruence between human resources, marketing, operations, finance and distribution strategies (Agnihotri, 2013); organizational structure and decision-making styles (Green, Covin and Slevin, 2008); and matching a firm to its external settings such as relation of strategy to market structural variables (Rumelt, 1982) or the product life cycle (Anderson and Zeithaml, 1984). Furthermore, understanding of fit between organization and environmental conditions is crucial for explaining variations in firm performance (Venkatraman and Prescott, 1990).

Although central to both theoretical discussions and empirical research in strategic management, the concept of fit lacks a precise definition. Fit-based relationships have been approached and verbalized in multiple ways such as alignment, matching, contingency, consistency, congruence, or configuration. Based on the criteria of the degree of specificity of the functional form of fit-based relationship, the choice of anchoring the relationship to a particular criterion, and the number of variables investigated, Venkatraman (1989b) identified six different perspectives of fit, i.e., fit as moderation, mediation, matching, gestalts, profile deviation, and covariation, with each implying distinct theoretical meaning and analytical schemes. More broadly, Meyer Tsui and Hinings (1993) distinguished between contingency and configurational approaches for organization analysis. While the former indicates examining separate characteristics, the latter emphasizes on the simultaneous consideration of combinations and an entire system of characteristics, which provide a holistic approach to
understanding people, groups, and organizations (Meyer, Tsui and Hinings, 1993). Thus, the configurational approach can be regarded as an extension of the contingency approach into multivariate combinations of organizational and environmental factors, which may better explain differences in performance compared to bivariate relationships (Dess, Lumpkin and Covin, 1997). To establish and test configurations, configuration research has used various methods such as clustering algorithms, interaction effects, deviation scores, or set-theoretic approach (Fiss, 2007; Short, Payne and Ketchen Jr, 2008).

Different perspectives of fit are not mutually exclusive. They should be considered as appropriate for different theoretical questions and level of maturity of research stream. In this dissertation, the concept of fit investigated between a firm’s strategic orientation and industry context is conceptualized and tested as moderation or interaction between variables. As a recent literature review shows (Boyd et al., 2012), interactions are the most commonly used tool to test contingency hypotheses in strategic management. Methodologically, fit-based relationships are modeled using both contingency and configurational approaches as two-way and three-way interactions to explain the distinct role of separate environmental features and to simultaneously account for their holistic nature (Wiklund and Shepherd, 2005).

In the EO research field, various studies have examined the characteristics of organizational task environment and their impact on EO and firm performance (e.g., Covin and Slevin, 1989, Lumpkin and Dess, 2001; Martins and Rialp, 2013). The results are hardly consistent, particularly with regard to which end of the munificence-hostility continuum fits EO better (e.g., Kreiser and Davis, 2010; Martins and Rialp, 2013; Rosenbusch, Rauch and Bausch, 2013), reinforcing the complexity of the fit-based relationship. To better clarify and extend the results of previous studies, this dissertation applies a more detailed view of the role of munificent versus hostile environment in shaping the EO-performance linkage by simultaneously examining and comparing contingency and configurational approaches (Publication V). Additionally, the moderating influences of dynamism, hostility, and heterogeneity on the EO-performance relationship are examined in the broader context of developed and emerging markets (Publication IV).

### 2.5 Theoretical framework of the study

This study explores the relationship between strategic orientations and firm performance via several theoretical lenses that have been described in the previous sections. The study is composed of five publications, each of which accounts for complementary effects and/or contextual embeddedness of EO, MO, and/or LO. Table 2 summarizes theoretical approaches for investigating strategic orientations–performance relationship used in this study, including their main tenets, implications for strategic orientations research, and application in publications.
### Table 2. Theoretical approaches for strategic orientations–performance relationship

<table>
<thead>
<tr>
<th>Theoretical approach</th>
<th>Main tenets</th>
<th>Main implications for SO research</th>
<th>Application in publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complementarity perspective</td>
<td>Firm’s value creation and performance results from combining many different factors in unique ways. Certain factors may be more valuable only in the presence of other factors (Ennen and Richter, 2010; Milgrom and Roberts, 1995)</td>
<td>Strategic orientations reflect the means by which firms choose to attempt to enhance performance. Firms integrate multiple strategic orientations to create unique synergies</td>
<td>Publications I, II</td>
</tr>
<tr>
<td>Crisis management, business turnaround</td>
<td>Firm performance in adverse environments is influenced by the choice of appropriate turnaround strategy linked to the nature of turnaround situation (Hofer, 1980; Robbins and Pearce II, 1992; Schendel, Patton and Riggs, 1976)</td>
<td>Certain turnaround strategies have similar characteristics with strategic orientations, particularly for externally caused turnaround situations</td>
<td>Publication II</td>
</tr>
<tr>
<td>Institutional perspective</td>
<td>Firm’s strategic choices and performance are influenced by formal and informal institutions (North, 1990; Scott, 1995; Peng, 2002)</td>
<td>Differences in strategic orientations–performance relationship can be attributed to institutional environment that firms operate within, including developed and emerging markets</td>
<td>Publications III, IV</td>
</tr>
<tr>
<td>Strategic fit, contingency and configurational approaches</td>
<td>Firm performance is a result of the proper alignment of organizational characteristics with environmental factors (Burns and Stalker, 1961; Lawrence and Lorsch, 1987)</td>
<td>The strength and direction of the relationship between strategic orientations and performance can be explained by environmental factors separately or in a configuration</td>
<td>Publications II, IV, V</td>
</tr>
</tbody>
</table>

Although the role of strategic orientations in a firm has been explained from various theoretical perspectives, earlier empirical studies have yielded mixed evidence of their performance implications. This could be attributed to the fact that previous studies have often focused only on single orientation without considering the orientations’ relative performance contributions and potential complementarities; and have not considered the
2.5 Theoretical framework of the study

complexity of contextual factors at different levels that affect performance outcomes of strategic orientations. These issues provide the motivation to develop a theoretical framework of this study.

The framework addresses issues of complementarity and contextualization of strategic orientations. First, it integrates three fundamental strategic orientations, i.e., EO, MO, and LO, in one model, compares and contrasts their parallel individual effects, and examines joint complementary effects on firm performance. Second, the framework contextualizes relevant strategic orientations in various settings at country and industry levels, each of which is analyzed in individual publications. The contextual factors are considered to be salient research settings in which the study was conducted (economic crisis, and developed and emerging markets), and are observed as influences that directly shape the way in which strategic orientations affect firm performance (institutional and industry factors).

Overall, by combining multiple strategic orientations and contextual dimensions, this study represents an attempt to holistically analyze the relationship between orientations and firm performance, as well as synthesize and extend the knowledge base on this phenomenon. Figure 2 shows the theoretical framework of this dissertation.

![Theoretical framework of the study](image)

Figure 2. Theoretical framework of the study
3 Methodology and research design

This chapter discusses the philosophical and methodological considerations that guided this study. It further presents a survey research design and discusses data collection for this study and variable measurements, which is followed by a description of the data analysis methods and an assessment of the reliability and validity of the study. Lastly, the research methods that have been applied in all five publications are summarized.

3.1 Philosophy of science considerations

This study focuses on investigating strategic orientations–performance relationship in different environmental contexts. It falls under the main principles of *positivism* or logical positivism paradigm (Godfrey-Smith, 2009), which has, for centuries, dominated scientific inquiry, and has been derived from study of natural sciences. Logical positivism is based on empiricism and asserts that only statements verifiable via empirical observations are cognitively meaningful. Ontologically, positivism sees social reality as objective and implies that social phenomena exist independently of social actors. In terms of knowledge, the epistemological belief of positivism implies that social phenomena can be apprehensible, characterized, and measured. Positivism is concerned with the empirical testability of theories, their verification or falsification, and the discovery of causal relationships, which form the basis of generalized knowledge. The role of a researcher is to discover social reality by creating precise measures, and in this investigation, the researcher is seen to be value-free, plays a passive role, and does not intervene the phenomenon of interest. In terms of business research, positivism suggests that there is an external viewpoint from which it is possible to examine organizations comprising real processes and structures beyond the actions of their members (Burrell and Morgan, 1979). There have been discussions indicating that the application of positivistic principles to research on social phenomena can be problematic (Evered and Louis, 1981, Morgan, 1980). Indeed, many researchers practicing positivist research would consider some of these principles to be ideal and often compromised for executing research activity. Moreover, in social sciences, it is eventually about approaching to such principles as closely as possible acknowledging certain research limitations. The ontological and epistemological philosophical positions influence the choice of methodology and the way in which research is conducted.

When considering the nature of the relationship between theory and research, this study utilizes a *deductive* approach. According to this approach, theory acts as a guide for research. Strategic orientations can be considered as a mature research field with existing literature on the topic, theoretical approaches, and established measurement instruments for key concepts. This allows developing hypotheses on the basis of known facts about the strategic orientations research field and theoretical considerations related to it. This then helps create more complex research models and embed them in various contexts, and then subject them to empirical examination that results in their verification or falsification. Subsequently, the implications of the results obtained from testing a
theory are inferred back. This involves, in this way, a movement to induction and revision of theory (Bryman and Bell, 2011).

This study utilizes a *quantitative* methodology, which facilitates examination of theoretical models by collecting large amounts of quantitative data, using valid and reliable measurements of constructs and rigorous testing of the hypothesized relationships, and may enable dissemination of research results to a larger population beyond that of the investigated cases. The selection of quantitative methods is related to the discussion on methodological fit in field research (Edmondson and McManus, 2007), which suggests internal consistency among the stage of prior theory and method. In particular, mature theory, which presents well-developed constructs and models studied over time and results in a body of work in a given study field, mostly corresponds to quantitative type of data that is collected and analyzed. In this manner, relatively extensive previous literature on strategic orientations can be used to identify critical constructs, examine models with increased precision and add specificity, new explanations to mechanisms underlying this phenomenon or provide new boundaries to existing theories.

### 3.2 Survey research design

#### 3.2.1 Research process

A *survey* research is applied to examine relationships between variables. It comprises a cross-sectional design that requires the collection of a body of quantitative data predominantly using questionnaires at one point of time, which are then analyzed to reveal patterns of association (Bryman and Bell, 2011). The choice behind applying a survey research in the dissertation is the interest in variation with respect to firms and the ability to make finer distinctions. This is more easily encountered in all variables of interest when a large amount of data is collected and analyzed. A survey research allows collecting a large amount of data at a relatively low cost and time; however, the simultaneous collection of data on variables allows revealing associations between them, but creates a limitation in establishing the direction of causal influence.

Survey research entails operationalization of concepts of interest to make them measurable and distinguishable for empirical observations. To operationalize the key concepts, this dissertation utilizes a perceptual approach to measurement, which relies on subjective assessments, and thus, can be considered to have fewer rigors for the positivist principle of objective measurement. Measurement of strategic orientations, which are multifaceted concepts, often non-codifiable or directly observed, can hardly be addressed by company databases or annual reports. An example of a secondary financial measure of EO was based on the data of large public companies (Miller and Le Breton-Miller, 2011), which is, however, not available for smaller private firms. Conceptually, while focusing on external manifestations of EO and being strong in its objectivity, this method does not get directly at the entrepreneurial opinions of owners.
3.2 Survey research design

and managers of the firms and, therefore, it is limited in its ability to fully capture the EO concept. Because strategic orientations cannot be thoroughly objectively quantified or reported, researchers widely utilize survey strategy and perceptual assessment by key decision-makers, such as firm’s founders and/or CEOs, to obtain information about strategic orientation. The usage of established measurement scales in survey research highlights some key characteristics of the phenomenon and allows making comparisons with other studies. Given the psychometric approach to measuring the variables in the dissertation, a particular attention was paid to establishing reliability and validity of measurements in each publication. The knowledge on strategic orientations can also be obtained through in-depth interviews, which can provide valuable and rich data on the motivation behind developing strategic orientations and how they are manifested in a firm by answering the questions of why and how (e.g., Ruokonen and Saarenketo, 2009). Interviews yield more case-specific knowledge that was not in the focus of this study, and they may also complement the survey and help provide qualitative insights, which may be considered as one of the directions for future research.

Furthermore, to seek explanations for similarities and differences and to gain deeper understanding of the EO-performance relationship in different institutional contexts, a comparative approach is applied. This approach entails examining phenomena in two or more countries using similar research instruments with the intention to compare their manifestations in different institutional and sociocultural settings.

Figure 3 shows the research process of this dissertation. To answer the main research question (RQ) and research sub-questions (RSQ), the hypotheses were deduced from the theory and empirically tested using three different datasets. The last step of discussion and contributions involves inferring implications of results for the theory and its refinement by establishing boundary conditions. Moreover the obtained results have implications for developing certain research sub-questions such as examining whether strategic orientations complementarity in stable environments holds during an economic crisis and revealing how the EO-performance relationship is different for developed and emerging markets, which differ in their institutional environment. Overall, the results of the individual publications provide answers to the main research question of this dissertation.
3 Methodology and research design

3.2.2 Sampling and data collection

In the empirical part of this study, three different datasets were used to answer the research sub-questions: the dataset of Finnish and Russian firms collected in 2013–2014, the dataset of Russian firms collected in 2015–2016, and the global dataset of firms from 41 countries, which was used as a part of the Global University Entrepreneurial Spirit Students’ Survey (GUESSS 2016).

Dataset 1

To address the sub-questions on the individual and joint contribution of EO, MO, and LO to firm performance (Publication I), the differences in the EO-performance relationship in developed and emerging market contexts (Publication IV), and the EO–performance relationship contingent upon organizational task environment (Publication V), the data on firms were collected from Finland and Russia in 2013–2014. The data collection was performed by a research group, including the author herself, at the Centre for Entrepreneurship at Graduate School of Management of St. Petersburg University.
3.2 Survey research design

The samples of Finnish and Russian firms were obtained from the Amadeus and the SPARK-Interfax databases. To provide a broad representation of firms, privately owned SMEs from multiple industries and geographical regions were selected. A majority of Finnish firms are located in Eastern, Southern, and Western regions, and most Russian firms are located in the Northwestern and Central regions as most economic activity is concentrated there. To test the effects of different types of strategic orientations on firm performance and investigate the role of organizational task environment, a standardized questionnaire was developed. The questionnaire included information about a firm’s EO, MO, and LO, different environmental characteristics such as dynamism, hostility, heterogeneity and munificence, firm performance, and firm characteristics (firm age, firm size, and industry type). The key respondents were companies’ founders and/or CEOs because of their responsibility to strategically manage firms.

Finland and Russia were selected as representatives of a developed and an emerging market based on their level of economic development. These countries are closely related to each other as they share a common border and have a long history of relationships and trading partnership. Yet, they are very different in economic, institutional, and cultural profiles, which create substantial differences in the external business environment firms operate in, and represent suitable settings for comparing a firm’s strategic behavior and its performance implications in these contexts. For this purpose, Russian and Finnish samples (104 and 117 firms, respectively) were separately analyzed in Publication IV. In Publications I and V, which did not aim to reveal differences between these countries but rather focus on establishing strong relationships that are held across different country contexts, two samples were pooled in one dataset, and an approach to ‘deculture’ data by standardizing it separately in each country was applied (Engelen et al., 2015) to help remove country-specific effects. The pooled dataset consists of 221 firms in Publication I and 163 firms in Publication V. This difference is explained by data collection being in progress when Publication V was being written and usage of different approaches to deal with missing values, the choice of which was related to sample size considerations for data analysis. The majority of sampled Finnish firms are small and have between 1 and 100 employees, and Russian firms employ between 1 and 500 employees. On an average, Finnish and Russian firms have been operating for 18 and 11 years since their foundation, respectively. Finnish firms are quite evenly distributed across production and services sectors of economy, and over half of the Russian firms operate in the service sector.

Dataset 2

To address the sub-question on the effects of EO and MO during economic crisis (Publication II), the data on firms were collected from Russia in 2015–2016 when the country experienced a sharp decline in economic growth. The survey design and data collection were executed within a research project of Graduate School of Management of St. Petersburg University and School of Economics and Management of Far Eastern Federal University (Russia) with the author’s participation. In 2015, the Russian
economy contracted by 2.8% as estimated by gross domestic product (GDP), the national currency depreciated by over 50% after a twofold decline in oil prices, and inflation rate reached nearly 13%, which led to a significant increase in bankruptcies among Russian SMEs (Federal State Statistics Service, 2018). The macroeconomic instability substantially elevated the levels of environmental uncertainty, complexity, hostility, and dynamism. These environmental conditions provide a rich context for examining strategic orientations in the unfavorable external environment of economic crisis, which creates emerging challenges and threats for organizations and indicates the need to quickly make strategic decisions.

For sampling Russian firms, a comprehensive procedure to generate a random sample was applied using a 13-digit Main State Registration Number (OGRN), which a company receives when registering with the tax authorities. The generated numbers were downloaded into the SPARK-Interfax database to check for their validity, obtain information of firms, and apply selection criteria. In total, 10,359 firms were selected with firms being privately owned SMEs from different industries and regions all over the country. After validation of firms by calling their phone numbers, 2,583 target companies were invited to participate in the survey. A standardized questionnaire was developed to assess strategy and organizational environment of firms during the economic crisis. This includes information about firm’s EO, MO, financial capital availability, and impact of crisis on firm performance. Respondents to the questionnaire were companies’ founders and/or CEOs. Overall, 656 questionnaires were returned, and, after cleaning the data, 612 usable responses were utilized in Publication II. These firms employed between 3 and 500 employees with a majority of them being small with fewer than 100 employees. Firms were on an average 13.6 years old, and most of them belonged to the wholesale and retail trade, as well as services and manufacturing industries.

**Dataset 3**

To address the sub-question about the role of national-level institutions in shaping the EO-performance relationship (Publication III), the data on firms from 41 countries were utilized as a part of the GUESSS 2016 data. The international research project GUESSS, founded by the Swiss Research Institute of Small Business and Entrepreneurship at the University of St. Gallen in 2003, is held every two years. Since 2016, this project was co-organized by the University of St. Gallen and the University of Bern (Switzerland). For each data collection wave, a comprehensive survey was developed by the GUESSS core team and sent to teams from the participating countries. The team in Russia was represented by Graduate School of Management of St. Petersburg University and the team leader, Prof. Galina Shirokova, who was responsible for data collection in Russia by distributing questionnaires to students and recruiting national partner universities, and got access to the international dataset used

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4 More information about the GUESSS project is available at: http://www.guesssurvey.org/

3.2 Survey research design

in this study. The author participated in the project at the stage of national report writing.

The GUESSS project aims to systematically study entrepreneurial intentions and activities of university students across different countries. An essential part of the survey is devoted to assessing characteristics, strategic behavior, and performance outcomes of established businesses. The information about a firm’s EO is included in the dataset of 2016, which was collected from 50 countries (122,509 responses). This large-scale cross-country data is particularly suitable for empirical examination of the relationship between EO and firm performance across national contexts, and the extent to which this relationship is moderated by a national-level institutional environment. Reflecting the study’s objective, the data for Publication III was a sub-sample of the active founders who were running their own business (10,820 responses). Despite some criticism of the usage of student samples in management and entrepreneurship research (Smolka et al., 2016), recent studies have shown that student entrepreneurs could be compared to expert entrepreneurs for decision-making (Politis, Winborg and Dahlstrand, 2012; Shirokova et al., 2017). The data are based on student entrepreneurs who answer about their businesses; however, it does not provide companies’ identifying information to enable verification of their suitability, which is reflected in the limitations. After cleaning the data, it accounted for 6,389 usable responses from 41 countries. Regarding a firm’s characteristics, a majority of them were small (having between 1 and 111 employees) and young; they were operating on an average for 2.1 years since their foundation. The most prevalent industries firms operate within are the wholesale and retail trade, advertising/design/marketing, and information technology and communication.

3.2.3 Measures

While measuring variables, the study relied on established scales that were extensively used in prior studies on strategic orientations. Additionally, objective measures obtained from global databases were applied to assess country-level institutional variables. Individual items of the scales have been reported in the publications.

Independent variables – strategic orientations

In all publications, the measurement of EO is based on the scale of Covin and Slevin (1989), which captures the dimensions of innovativeness, proactiveness, and risk-taking. The scale comprises nine items, including three items for each EO dimension, which are measured on a seven-point Likert scale. It assesses the extent to which a firm typically favors a strong emphasis on innovations, markets new lines of products or services, makes dramatic changes in offerings, initiates actions which competitors respond to, is the first to market to introduce novel ideas, and has a strong proclivity for high-risk projects and bold, wide-ranging acts to exploit potential opportunities. This scale was found to accurately capture the level of a firm’s EO and since its development was widely used in subsequent empirical studies (e.g., Atuahene-Gima and Co, 2001;
Kreiser et al., 2013). To investigate EO as an overall strategic orientation, a unidimensional approach to conceptualization was applied in most publications in line with the predominant manner in which EO was analyzed in previous studies (Wales, Gupta and Mousa, 2013). In Publication IV, which seeks to assess the effects of separate EO dimensions rather than investigate an overall EO level, a multidimensional approach was used.

To measure the level of a firm’s MO in Publications I and II, the scale developed by Narver and Slater (1990) was applied (MKTOR scale). It operationalizes MO as comprising of customer orientation, competitor orientation, and inter-functional coordination. The scale comprises 15 items, including six, four and five items for each MO dimension, respectively. These items describe the extent to which a firm is committed to understanding and serving customers’ needs, is driven by creating greater value for customers, regularly visits customers, systematically measures their satisfaction, discusses competitors’ strategies, rapidly responds to competitive actions, integrates all business functions to serve market needs and freely communicates market information across them. This scale has been shown to be a valid instrument of assessing a firm’s MO (Cano, Carrillat and Jaramillo, 2004).

For a firm-level LO operationalization in Publication I, the scale of Sinkula, Baker and Noordewier (1997) was applied which captures the dimensions of commitment to learning, shared vision, and open-mindedness. The scale consists of 11 items, including four items for the first and second LO dimensions, and three items for the third dimension. The scale assesses the extent to which a firm values learning as a key to competitive advantage and guarantee of organizational survival, considers employee learning as an investment rather than an expense, has a commonality of purpose and total agreement on organizational vision across all functions, and critically evaluates and continually questions shared assumptions about the business and the marketplace.

**Dependent variable – firm performance**

Firm performance is a multifaceted construct and different approaches have been used for its measurement (Delmar, Davidsson and Gartner, 2003; Rauch et al., 2009). In general, performance can be measured using financial and non-financial indicators with objective data and subjective estimators. The widely used financial indicators of firm performance include growth and profitability measures (Soininen et al., 2012a), and examples of non-financial performance indicators are goal achievement, satisfaction, global success ratings, and other similar measures (Rauch et al., 2009). Objective performance measures are obtained from secondary sources such as databases, company documents or archival data. They help avoid the issue of common method variance, which arises when both the dependent and independent variables are collected from the same respondents at the same time. Subjective performance measures are self-reported and reflect managers’ perceptions of their firm’s performance compared to their main competitors or previous performance outcomes. Such measures offer greater possibilities for assessing multiple dimensions of firm performance; however, they may
be subject to bias because of the mono-method of variables measurement (Rauch et al., 2009).

In this study, firm performance was operationalized as financial performance (Publications I, IV, V), crisis performance (Publication II), and relative market performance (Publication III). In particular, in Publications I, IV, V, all of which are based on dataset 1, the financial indicator of sales growth rate is used. This is widely applied in the management literature and considered to be a relevant growth measure for SMEs (Delmar, Davidsson and Gartner, 2003). Additionally, profit growth rate is used for a robustness check in two publications. As publicly available performance indicators are less accessible for small firms compared to larger organizations, these measures were included in the questionnaire. To address the potential concern related to self-reported assessment of focal variables, the questionnaire was designed to include different question formats for independent and dependent variables with the latter measured by a fact-based item that is generally less likely associated with common method variance (Chang, van Witteloostuijn and Eden, 2010). Furthermore, the self-reported performance indicators were verified using information obtained from official databases (Amadeus, SPARK Interfax), giving preference to objective data wherever possible.

To capture firm performance in crisis times in Publication II, which is based on the dataset 2 collected in Russia during the period of economic crisis, the respondents’ assessment of the impact of economic crisis on their firm’s performance was utilized. In particular, the respondents assessed the extent to which economic crisis impacted their firm across the following performance indicators: sales revenue, profitability, pricing, and average deal size, on a seven-point Likert scale, in which 1 stands for “very negatively impacted,” to 7, which stands for “very positively impacted” (Latham, 2005). Unlike previous studies that accounted only for negative consequences of economic crisis for firms (Soininen et al., 2012b), this scale allows to capture a firm’s ability to capitalize on economic crisis, which is the focus of this publication.

In Publication III, which is based on the dataset 3, firm performance was operationalized as relative market performance by the respondents’ assessment of how well their business performed compared to other businesses selling similar products/services in the following aspects: making profit, sales growth, market share growth, and job creation, on a seven-point Likert scale in which 1 stands for “very poor” to 7, which stands for “very well” (Eddleston, Kellermanns and Sarathy, 2008).

Subjective operationalization of firm performance, although being a source of potential biases, is widely used in management research (Deutscher et al., 2016; Rauch et al., 2009). In some cases, often with regard to small private firms that are more reluctant to provide confidential financial information (Baker and Sinkula, 2009; Lonial and Carter, 2015), the objective performance data is not available. Moreover, subjective performance measures are applicable to cross-industry studies as objective measures may substantively differ across different industries (Deutscher et al., 2016), and to
studies conducted during the crisis context (Grewal and Tansuhaj, 2001; Naidoo, 2010) in which financial conditions of firms may not be accurately indicated using objective measures. Although previous studies provide an evidence of the significant correlations among objective and subjective performance measures (Dess and Robinson, 1984), considering the latter as a reliable indicator of firm performance, the lack of objective measures is discussed as one of the limitations of this study.

Moderator variables

In Publications II-V, the relationship between strategic orientations and firm performance is investigated under different levels of environmental variables, which have been used in the model as moderators.

The measurement of financial capital availability during an economic crisis (Publication II) is based on the scale of Story, Boso and Cadogan (2015). This scale comprises four items, measured on a seven-point Likert scale, which assess the extent to which a firm has access to financial capital to support its business operations, is able to obtain it easily and at short notice, and has financial resources at its discretion to fund business-related initiatives.

National-level institutional variables (Publication III) are measured using objective indicators obtained from global databases. In particular, the legal system was assessed by the rule of law and judicial independence indices, which reflect the legal environment from the 2016 International Property Rights Index (IPRI). The financial system was measured by the ease of access to loans and venture capital availability indicators obtained from the Global Competitiveness Report 2015-2016. The operationalization of entrepreneurship education was based on the 2016 Global Entrepreneurship Monitor National Expert Survey (GEM NES), which assesses the extent to which training for creating or managing SMEs was incorporated within the education at post-secondary levels. GEM NES was also a source of supportive culture measure, which assesses the degree of motivation and the status of entrepreneurship as a profession (De Clercq, Danis and Dakhli, 2010).

Environmental dynamism, hostility, and heterogeneity (Publications IV, V) are operationalized using established scales developed by Miller and Friesen (1982). The seven-point Likert scales comprise five, six and four items, respectively. The dynamism scale assesses the frequency of changes in a firm’s marketing practices to keep up with the market and competitors, the rate of obsolescence of products/services, the degree of predictability of consumer tastes and competitors’ actions, and the degree of changes in technologies. The hostility items describe the extent to which the environment threatens a firm’s survival, including challenges such as tough price and quality competition, dwindling markets for products, scarcity of resources, and government intervention. The heterogeneity scale assesses the extent to which a firm is diversified and whether there are differences amongst products/services, which regard to customers’ buying habits, the nature of competition, and market dynamism and uncertainty (Miller and Friesen,
3.3 Data analysis

Market growth (Publication V) is used to capture the environmental munificence and—as it is characterized by high growth in customer demand—it is measured by demand growth rate for a firm’s products/services in the main industry in which the firm operates.

Control variables

To account for alternative explanations for variations in firm performance, this study included a number of other factors of the internal and external environment as control variables. In particular, a firm’s age, measured as the number of years since a firm’s foundation; a firm’s size, estimated as a firm’s number of employees; and industry type were controlled for in research models in all publications. In Publication II, which focuses on strategic orientations during an economic crisis, additional controls were applied for a firm’s past performance, estimated by an objective financial indicator of sales revenue in the pre-crisis year; and differences in the regional environment, assessed by regional development index and dynamics of gross regional product (GRP), as certain regions are differentially affected during an economic downturn, and the severity of the crisis for a firm may depend on its past financial conditions. In addition to a firm’s characteristics, a cross-country study in Publication III includes founder characteristics as control variables, as the founder plays a significant role in the initial development of the business, and country characteristics to account for differences in the country’s economic development. The specific variables include founder’s age; gender; field and level of study; commitment to a firm, which indicates whether a business is intended to be a student’s main occupation after graduation; number of partners who have an ownership stake in the business; and GDP per capita. Overall, the number of control variables utilized helps to provide additional assurances for the study’s results.

3.3 Data analysis

To analyze the data, different statistical quantitative methods were applied in the publications, the selection of which was determined by the studies’ objectives, the type of data, and variables that were used. The analytical methods included confirmatory factor analysis (CFA), structural equation modeling (SEM), commonality analysis, moderated regression analysis, and hierarchical linear modeling (HLM).

Because the main variables of this study, including strategic orientations and some elements of organizational environment, are latent variables, measured using a number of constituent items, the structure of the measurement models, reliability, and validity of the measures were evaluated in the publications by performing a CFA. This analysis specifies a measurement model by defining the relationship between the latent variable and its constituent items; it allows verification of the applicability of the measurement model to the empirical data, helps detect problematic items in the scales, and refine the tested models to improve the overall data fit. Based on the measurement models, SEM analysis allows to test structural models of the hypothesized relationships between the
variables paying particular attention to the structure of the constructs. In this manner, SEM is used in Publication I to detect whether EO, MO, and LO represent the fundamental indicators of a higher-order construct, as well as how this construct is related to firm performance. In Publication IV, SEM is used to investigate the structure of EO and the effects of its separate dimensions on firm performance in a developed market compared to an emerging one. Both CFA and SEM were performed using the SPSS AMOS software.

To investigate the relative explanatory power of EO, MO, and LO, as well as their various combinations for firm performance in Publication I, a commonality analysis was applied (Lomberg et al., 2017). Commonality analysis compares explained variance of the models with different subsets of independent variables, and it is applied to models in which independent variables are correlated and jointly affect firm performance, which makes it an appropriate tool for analyzing strategic orientations. Commonality analysis allows to decompose the total variance in firm performance explained by different strategic orientations and to assess the parts of variance attributed to unique (variations only in EO, MO, or LO), bilaterally shared (covariations between any pair of strategic orientations), and commonly shared (covariation between all strategic orientations) effects of EO, MO, and LO. Shared effects are different from interaction effects, which are often tested in strategic orientations studies. As an illustration, for interaction effects, the condition refers to the level of the variable (i.e., the strength of the relationship between two variables depends on the level of the third variable), and the interacting variables do not need to be correlated. However, for the shared effects, the condition refers to the change in the variable (i.e., a change in one variable only has an effect on another variable if it is associated with a change in the third variable, independently on its actual level), which requires the variables to be correlated (Lomberg et al., 2017). The commonality analysis was performed using a program for the Stata software.

To assess the effects of various configurations of strategic orientations and environmental factors in Publications II and V, moderated regression analysis was applied. To investigate the performance outcomes of strategic orientations under different (high/low) levels of moderator variables, two- and three-way interaction effects were tested using interaction terms created by multiplying the respective variables by each other. In particular, configurations of EO, MO, and financial capital availability in Publication II, as well as EO, environmental hostility, and market growth in Publication V were explored by plotting the three-way interaction effects and performing the tests of differences in regression slopes (Dawson and Richter, 2006). The Stata software was used to implement the regression analyses.

To investigate the impact of country-level institutional environment on the relationship between a firm-level EO and performance in Publication III, a multilevel, HLM approach was used (Raudenbush and Bryk, 2002). HLM is suitable for analyzing the global data in which firms are nested in countries and the variables are measured at different levels such as firm-level EO and national-level institutions. Such a multilevel
3.4 Reliability and validity

Reliability

Reliability is concerned with the integrity of conclusions obtained in the study (Bryman and Bell, 2011). Generally, the assessment of the validity includes measurement validity, internal validity, and external validity.

Measurement validity assesses whether a measure of a concept really reflects the concept that it is supposed to be denoting. The following elements are involved when
considering the measurement validity (face validity, data fit, dimensionality and convergent validity, discriminant validity, and measurement invariance).

**Face validity** is established when the measure reflects the content of the concept in question. Face validity of measures was examined by asking people with experience and expertise to evaluate measures in terms of their capturing the needed concepts, and by pre-testing the questionnaires before data collection to assess and minimize potential question misunderstanding and problems with responding. To reduce potential cross-country construct invariances, related to the application of scales to Finnish and Russian contexts, a standard method of translation and back-translation of the questionnaire was employed (Brislin, 1970). This helped to ensure that the meaning of the translated questions in each country’s language corresponds to the original meaning.

**Data fit** of measurement models was evaluated using CFA to ensure their appropriateness for investigation (Fornell and Larcker, 1981; Gerbing and Anderson, 1988). CFA was conducted to establish construct integrity. Based on the factor loadings, fit statistics, and modification indices, several scale items that were not tapping a single underlying construct were eliminated, which helped to adjust the constructs to the data and improve overall data fit (Gerbing and Anderson, 1988). Goodness-of-fit index (GFI) and comparative fit index (CFI) above the values of 0.95 along with root mean-square error of approximation (RMSEA) below 0.08 were considered as indicators of a good model fit (Hu and Bentler, 1999). The measurement models in all datasets exhibited adequate fit to data, although certain peculiarities were revealed. In particular, the investigation of EO dimensions in Publication IV showed that, while the three-dimensional EO structure (Covin and Slevin, 1989) had a good fit to Finnish data, a measurement model of EO with two dimensions—in which innovativeness and proactiveness were combined in one factor and risk-taking constituted another factor—fits the Russian data better. Besides this, environmental hostility scale (Publications IV and V) did not show appropriate internal consistency, which might potentially be related to the fact that scale items assess various aspects of a hostile environment and may not be highly correlated. Therefore, instead of combining different hostility aspects, the scale item assessing overall hostility level was used for further analyses. All items significantly loaded on singular underlying latent variables, demonstrating unidimensional measurements and convergent validity. Moreover, the results show acceptable levels of the scales’ composite reliability (CR) and average variance extracted (AVE), which measures the amount of variance captured by a construct in relation to the amount of variance due to measurement error.

**Discriminant validity** is established when measures that are not supposed to be related are actually unrelated. It was assessed in the publications in different ways: by examining correlation coefficients of the study constructs using bootstrapping analysis, comparing AVE for latent variables with the shared variance between them (Fornell and Larcker, 1981), and performing a chi-square difference test between a constrained model with fixed correlation between each of the two latent variables to one and an
unconstrained model with freely estimated correlation. The overall results confirmed the discriminant validity of the constructs.

Measurement invariance of the EO, MO, and LO variables in dataset 1 collected from two countries, i.e., Finland and Russia, was examined using a multi-group CFA to indicate that the same constructs were measured in each country and that the measures were interpreted in a conceptually similar manner by the respondents (Vandenberg and Lance, 2000). The results established configural and metric invariances, showing that the respondents conceptualized these constructs in the same manner in each country.

Internal validity is related to the issue of causality between the variables. Cross-sectional research is typically weak for internal validity as it produces patterns of association but does not allow to rigorously establish causal relationships between variables from the resultant data. In a majority of business research, it is not possible to manipulate variables; however, researchers are able to draw certain inferences about causes and effects because certain variables can be considered as given or assumed to be temporarily prior to other variables. This approach was adopted in the publications when capturing strategic orientations’ effects on firm performance as strategic orientations reflect the pattern of a firm’s behavior rather than a one-time action, and, therefore, take time to reveal their impact and can be assumed to be prior to performance variables. Additionally, the hypothesized relationships were built on a strong theoretical basis, and a number of alternative causes were included, which helped to make the causal inference stronger. However, keeping the causality limitations in mind, the hypotheses of the study do not make strong causal claims between variables, and a longitudinal design is encouraged in further studies.

The cross-sectional type of research and the reliance of this study on self-reported measures of certain constructs, such as strategic orientations, firm performance, and certain environmental variables, create a potential threat for common method variance (CMV), which could influence the study results. To overcome this aspect, several remedies were undertaken. During the ex ante research design stage, when designing questionnaires, the order of certain questions was mixed, certain scale items were reverse coded, and different question formats were used, such as fact-based questionnaire items, which could reduce the likelihood of CMV. When administering the questionnaires, the respondents were assured of anonymity and confidentiality of research and that there were no right or wrong answers (Chang, van Witteloostuijn and Eden, 2010). Furthermore, all questionnaire items were examined to ensure their clarity and that ambiguous terms were not included. During the ex post statistical analyses, Harman’s one-factor test was performed whose results showed that the variance explained by the first factor accounted for between 20.19% and 44.41% of the total variance in these publications. No factor accounted for a majority of the variance, indicating that common method bias was not an appreciable issue for either sample. For additional assurances, the threat of CMV was tested with CFA by estimating and comparing three competing measurement models, in which items were loaded either on a common latent factor, or on their respective latent factors, or on respective latent
factors and an additional common latent factor. It was observed that adding a CMV factor did not improve the model fit, assuaging possible concerns of common method bias. During empirical analysis, the specifications of the models included a number of interaction terms and complex relationships, which are less likely to be perceived by the respondents (Chang, van Witteloostuijn and Eden, 2010). Overall, the undertaken remedies helped mitigate CMV issue for this study.

As certain variables of the study, such as strategic orientations, are significantly correlated with each other, the test for multicollinearity in regression models was performed. The results demonstrated that all variance inflation factors (VIFs) were within an acceptable range. This reduced possible concerns of multicollinearity and indicated that all variables included in the models could be estimated (O’Brien, 2007).

External validity ensures whether the results of a study can be generalized beyond a particular investigated group to a larger population. It is related to the manner in which firms are selected to participate in research and is strong when the sample from which the data are collected has been randomly selected (Bryman and Bell, 2011). For data collection, representative samples of firms from different industries and geographical regions were used (datasets 1 and 2) as well as from a large number of countries (dataset 3), which increases the external validity of this study.

Furthermore, within the survey research design, there is a concern of the potential non-response bias. Several measures were undertaken to test for non-response bias in the first dataset. First, the Amadeus database allowed to compare the Finnish firms that had responded with those that did not respond using a t-test and a chi-square test, and there were no significant differences in the firm’s size and industry. Second, the Finnish and Russian samples each were split into two groups and compared by the date when the questionnaires were received. For both countries, the t-tests yielded no significant differences between the early and late respondents for the variables of interest. It can be, therefore, concluded that non-response bias did not appear to represent a significant problem for this study.

3.5 A summary of the research methods in individual publications

Table 3 summarizes the research methods used in all the five publications included in the dissertation. The information on data and sample size, variable measurement, and sources of measures, as well as methods of statistical analysis is provided.
<table>
<thead>
<tr>
<th>Data</th>
<th>Publication I</th>
<th>Publication II</th>
<th>Publication III</th>
<th>Publication IV</th>
<th>Publication V</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>221 Finnish and Russian privately owned SMEs, 2013/2014</td>
<td>612 Russian privately owned SMEs, 2015/2016</td>
<td>6,389 SMEs from 41 countries, 2016 (GUESSS data)</td>
<td>117 Finnish and 104 Russian privately owned SMEs, 2013/2014</td>
<td>163 Finnish and Russian privately owned SMEs, 2013/2014</td>
</tr>
<tr>
<td>Independent variables – strategic orientations</td>
<td>EO (Covin and Slevin, 1989); MO (Narver and Slater, 1990); LO (Sinkula et al., 1997)</td>
<td>EO (Covin and Slevin, 1989; Lumpkin and Dess, 2001); MO (Narver and Slater, 1990)</td>
<td>EO (Atuahene-Gima and Co, 2001, adapted from Covin and Slevin, 1989)</td>
<td>EO dimensions (Covin and Slevin, 1989)</td>
<td>EO (Covin and Slevin, 1989)</td>
</tr>
<tr>
<td>Study context and/or moderator variables</td>
<td>*</td>
<td>Context of economic crisis in Russia, 2015-2016; Financial capital availability (Story, Bosco and Cadogan, 2015) as a moderator</td>
<td>Legal system (IPRI), financial system (Global Competitiveness Report), entrepreneurship education (GEM NES), and supportive culture (GEM NES) as moderators</td>
<td>Context of a developed and an emerging market; Dynamism, hostility and heterogeneity (Miller and Friesen, 1982) as moderators</td>
<td>Hostility (Miller and Friesen, 1982) and market growth as moderators</td>
</tr>
<tr>
<td>Control variables</td>
<td>Firm age, firm size, industry type</td>
<td>Firm age, firm size, industry type, past performance, regional development index, GRP dynamics</td>
<td>Founder age, gender, study field and level, commitment to a firm, firm age, firm size, industry type, number of partners, GDP per capita</td>
<td>Firm age, firm size, industry type</td>
<td>Firm age, firm size, industry type</td>
</tr>
<tr>
<td>Statistical analysis methods</td>
<td>Confirmatory factor analysis, commonality analysis, structural equation modeling</td>
<td>Confirmatory factor analysis, regression analysis with moderator analysis</td>
<td>Confirmatory factor analysis, hierarchical linear modeling with moderator analysis</td>
<td>Confirmatory factor analysis, structural equation modeling with moderator analysis</td>
<td>Factor analysis, regression analysis with moderator analysis</td>
</tr>
</tbody>
</table>

*Note:* a Publication aimed to assess an integrative model of EO, MO, and LO in general, and therefore this cell is not applicable.
4 Summary of the publications and the results

This chapter summarizes the five research publications included in this dissertation. Each publication is discussed in a separate section, which presents its background and objective and highlights its results and contribution. The final section summarizes the results and contributions of the whole study.

Publication I discusses three fundamental firm-level strategic orientations and assesses their unique and shared contribution to explain the variance in firm performance. Publication II integrates entrepreneurial and market orientations as SME strategic responses in the context of an economic crisis. Publications III and IV draw attention to entrepreneurial orientation embedded in the institutional context, as well as developed and emerging markets. Publication V addresses the role of organizational task environment in shaping the EO-performance relationship. Overall, these publications help to establish an overarching view of strategic orientations, their interrelatedness, and performance implications in different contexts at country and industry levels.

4.1 Publication I: Orienting toward sales growth? Decomposing the variance attributed to three fundamental organizational strategic orientations

4.1.1 Background and objective

The first publication addresses the sub-question of how do entrepreneurial, market, and learning orientations individually and jointly (complementarily) contribute to explanation of variance in firm performance. EO, MO, and LO have been identified to have significant implications for firm performance (e.g., Keith and Stephen, 2006; Kirca, Jayachandran and Bearden, 2005; Rauch et al., 2009). By its strategic scope, a firm may either stay adhered to one strategic orientation or adopt a broader strategic approach by utilizing different orientations in its strategic decision-making. In an attempt to understand the interrelationship between multiple strategic orientations and their potential complementarities, several approaches have been examined (Hakala, 2011). In particular, a number of studies have investigated joint effects of orientations modeled as interactions (e.g., Boso, Cadogan and Story, 2012), higher-order constructs (e.g., Lonial and Carter, 2015), configurations of orientations (e.g., Ho, Plewa and Lu, 2016), or mediating relationships between them (e.g., Dutta, Gupta and Chen, 2016). However, the presented approaches are limited in their ability to provide insights into the structure of explanatory power of strategic orientations and the parts of variance attributable to unique, bilaterally shared, and commonly shared effects when considering performance consequences of these firm-level strategic orientations. The aim of this article was to advance this discussion by decomposing the variance across three strategic orientations and comparing their individual and joint (complementary) effects on firm performance, which is measured by sales growth. This was implemented
by an analytic approach based upon commonality analysis (Lomberg et al., 2017). Furthermore, by building on previous research and performing SEM analysis, the study tests EO, MO, and LO as indicators of a higher-order construct, which is termed as “proactive learning culture” (Gnizy, Baker and Grinstein, 2014) and reflects a firm’s ability to combine their market, entrepreneurial, and learning efforts for enhanced learning about new business opportunities. Figure 4 shows the hypothesized individual effects and complementary effect models of strategic orientations–performance relationship.

4.1.2 Results and contribution

CFA was used to assess the reliability and validity of measurement models. To test the hypotheses, a commonality analysis and SEM analysis were run on a pooled sample of 221 Finnish and Russian firms. The investigation of the unique effects of strategic orientations suggests that sales growth of a firm is overwhelmingly driven by EO, which represents the dominant explanation of variance accounting for 42%. The investigation of the shared effects of strategic orientations further demonstrates that the commonly shared effect of EO, MO, and LO is responsible for a significant portion of variance in sales growth (26%); however, it is smaller compared to the unique effect of EO. These results validate the aggregation of these three firm-level strategic orientations into a higher-order construct of proactive learning culture (PLC). A PLC melds understanding/monitoring customers and competitors (MO), developing and proactively
4.2 Publication II: Benefiting from economic crisis? Strategic orientation effects, trade-offs, and configurations with resource availability on SME performance

introducing new product-market offerings (EO), and questioning assumptions and learning (LO).

This study contributes to the discussion on strategic orientations and complementarities by comparing and contrasting the individual and joint effects of EO, MO, and LO, and revealing how they work in isolation or aggregate together to drive a firm’s sales growth. The study applies commonality analysis in the context of strategic orientations and decomposes the structure of their explanatory power. It provides an empirical support of a higher-order construct, which lies at the intersection of these three strategic orientations. Moreover, while the combination of strategic orientations is observed to explain firm performance, the study suggests that different aspects of a firm’s PLC may be more pronounced in various contexts. For managers, the study reports that EO-related activities are particularly relevant to sales growth; nonetheless, the intersection between EO, MO, and LO plays an important role and directs a firm toward new marketplace opportunities.

4.2 Publication II: Benefiting from economic crisis? Strategic orientation effects, trade-offs, and configurations with resource availability on SME performance

4.2.1 Background and objective

The second publication addresses the sub-question of how do complementary strategic orientations relate to firm performance under economic crisis. While there is growing interest to examine strategic orientations, the related knowledge is overwhelmingly based on studies that were performed in stable economic environments. However, to pursue viability and increased performance in the long-term, firms need, at times, cope with unfavorable events and shocks in the external environment. This article investigates the context of economic crisis as an example of a sudden environmental jolt, which requires firms to quickly make strategic decisions in an attempt to respond to economic downturn (Kunc and Bhandari, 2011). An economic crisis is usually viewed in terms of threats, or as an environment that presents substantial challenges to firms, enhances time and resource constraints, and does not allow firms to experiment with different strategies (Bao, Olson and Yuan, 2011). However, economic crises may create potentially fruitful opportunities that can be utilized by firms. The aim of this article was to examine entrepreneurial and market orientations as a means through which firms may operate during an economic crisis to pursue entrepreneurial opportunities and address changing market needs. The strategic orientation complementarity, typically observed during times of stability (Boso, Story and Cadogan, 2013; Ho, Plewa and Lu, 2016), is tested during crisis times. Moreover, because of limited resources, particularly during an economic crisis, and resource-intensity of strategic orientations (Covin and Slevin, 1991; Kumar et al., 2011), the study considers how increasing availability of financial resource during macro-economic constraints may affect the strategic orientations-performance relationship. Unlike studies that analyze the effect of
economic crisis on a firm’s survival, this study investigates how firms may capitalize on, or make the most of, an economic crisis. The relationship between EO, MO, and firm performance during an economic crisis tested in this publication is presented in Figure 5.

![Economic crisis context](image)

**Figure 5.** Theoretical model of Publication II: EO, MO, and firm performance during an economic crisis

### 4.2.2 Results and contribution

The measurement models were validated with CFA, and hypotheses were tested by performing a regression analysis using the data on 612 Russian SMEs. The data were collected during a period of economic crisis in Russia in 2015–2016 when the economy had experienced a sharp decline in economic growth and other macroeconomic indicators. The results reveal a positive effect of EO and a non-significant effect of MO on a firm’s ability to capitalize on the available opportunities present during the economic crisis. Intriguingly, the interactive effect of EO and MO appeared to be negative, suggesting a substitutive as opposed to complementary relationship between strategic orientations during the crisis. Furthermore, the investigation of a configurational model of EO, MO, and financial capital availability indicates that the trade-off between EO and MO is not reduced in the presence of greater financial resources. More and less productive configurations of strategic orientations in concert with firms’ financial capital availability are identified. A higher performance during economic crisis is achieved when a firm demonstrates a high level of EO, has financial capital, and deemphasizes its MO.

This publication contributes to the literature by demonstrating how EO and MO may enable firms to capitalize on potential opportunities during an economic crisis. The results also questioned the conventional wisdom pertaining to complementarity of
firms’ EO and MO, which was not evidenced during a crisis. For managers, the study indicates to pay attention to and invest resources in the development of entrepreneurial elements of their strategy during an economic crisis and increase awareness of negative performance consequences of simultaneously implementing both EO and MO, which holds irrespective of the availability of financial capital.

4.3 Publication III: Institutional contextualization of the entrepreneurial orientation-performance relationship

4.3.1 Background and objective

The third publication investigates institutional environment as a factor that shapes the relationship between a firm’s strategy and performance. It draws attention to entrepreneurial orientation as firms’ innovative, proactive, and risk-taking behaviors and their performance implications may be significantly influenced by their country’s formal and informal institutions (North, 1990). Accordingly, it addresses the sub-question of how do national-level institutions shape the entrepreneurial orientation-performance relationship. Entrepreneurship research increasingly utilizes institutional theory as a theoretical perspective (Bruton, Ahlstrom and Li, 2010). The EO concept was found to be applicable and valid across various national contexts and many empirical studies report its positive relationship with firm performance (Rauch et al., 2009). However, as established by meta-analysis, the strength of this relationship varies significantly across studies. This signifies the relevance of certain country-level conditions for shaping the way EO affects firm performance (Saeed, Yousafzai and Engelen, 2014). Studies have mostly focused on cultural moderators of the EO-performance relationship (Kreiser et al., 2013; Semrau, Ambos and Kraus, 2016). Yet, a substantial gap remains for conducting contextual studies on key aspects of a country’s macro institutional systems. Thus, the aim of this article was to understand the nuances and complexities of how institutions matter for EO with evidence that extends beyond a comparison of a small number of countries. For this purpose, the study draws on the national business systems institutional framework (Whitley, 1999) and examines how different facets of a country’s institutional environment, i.e., legal, financial, education systems, and cultural norms, may either amplify or attenuate the EO-performance relationship. The study utilizes the database from 41 countries, increasing the cross-national heterogeneity of EO research. Figure 6 illustrates the hypothesized relationship between EO and firm performance, which is moderated by different facets of national-level institutional context.
4 Summary of the publications and the results

CFA was used to assess the measurement models and hierarchical linear modeling was performed on the cross-country data on 6,389 small and young firms collected as a part of the Global University Entrepreneurial Spirit Students’ Survey (GUESSS). The results confirm a significant and positive EO effect on firm performance when controlling for individual, organizational, and national factors. Furthermore, it was revealed that the strength of the positive EO-performance relationship varies significantly across the national contexts and can be explained by four investigated institutional contingencies. In particular, a country’s level of financial system development and cultural support toward entrepreneurship enhances the benefits that a firm receives from EO. However, a country’s level of legal system development and entrepreneurship education appears to weaken the positive relationship between EO and firm performance.

This publication contributes to the discussion on contextualization of EO by providing insights into how four key institutional factors impact how well firms are able to translate their EO into firm performance. The results of this study are based on one of the most globally expansive samples collected on this phenomenon. Within international entrepreneurship in general, the study advances the consideration of a broader view on institutional environment in a comparative study of entrepreneurship. For policymakers, this study helps identify nuances of the role of existing institutions to stimulate the development of entrepreneurship in a country.
Given the substantial role of institutions for determining the context in which strategies are developed and implemented, and impacting the efficacy of these strategies, in general, and entrepreneurial orientation, in particular (Bruton, Ahlstrom and Li, 2010), the fourth publication provides a more detailed investigation of the EO-performance relationship by embedding it in the context of developed and emerging markets. It addresses the sub-question of what are the differences in the EO-performance relationship in developed and emerging market contexts. Theoretical models of EO were initially tested in developed economies, while research efforts in emerging market contexts have progressed at a slower pace (Wales, Gupta and Mousa, 2013). Furthermore, many theories developed in mature markets are challenged when applied to emerging economies (Bruton et al., 2013). Therefore, given the business environmental conditions attributed to emerging markets, compared to developed economies, differences are expected in the way EO is related to firm performance. The aim of this article was to reveal how the relationship between EO and firm performance measured as sales growth is different in an emerging market unlike a developed one. To explore these nuances, this relationship is modeled to be moderated by characteristics of organizational task environment. This study focuses on the individual effects of EO dimensions of innovativeness, proactiveness, and risk-taking. Figure 7 shows the model of EO-performance relationship in developed and emerging market contexts tested in this publication. In particular, attention is focused on SMEs operating in Russia and Finland. The two countries differ in economic and institutional profiles, which may create differences in the external business settings and the way firms adapt to it by developing their EO as well as the way EO impacts performance.

Figure 7. Theoretical model of Publication IV: EO and firm performance in developed and emerging market contexts
4.4.2 Results and contribution

The measurement models were assessed with CFA, and the hypotheses were tested with SEM using on a sample of 104 Russian and 117 Finnish SMEs. The study applied a multidimensional approach to EO conceptualization. The results revealed that in the Russian sample, EO exhibited a different dimensional structure from the original three distinct EO dimensions held for the Finnish sample. In particular, innovativeness and proactiveness collapsed into one behavioral dimension, while risk-taking constituted an attitudinal dimension. Furthermore, the results show that, in the Finnish market context, all EO dimensions are directly and positively related to a firm’s growth but not moderated by the characteristics of the external environment. In contrast, in the Russian market context, there are no direct significant relationships between EO dimensions and growth; however, there are significant positive moderating effects of the combined dimension of innovativeness and proactiveness with environmental dynamism and hostility. The differences in the EO-performance relationship in Russia and Finland are discussed in relation to differences in the level of development of formal institutions and national culture between these two countries.

This publication contributes to the literature by linking the nature of the EO-performance relationship to context of developed and emerging markets, and revealing differences in the EO structure and the EO impact on a firm’s growth in these contexts, accounting for different organizational task environments with an emphasis on the role of dynamism, hostility, and heterogeneity in this relationship. For managers operating in contrasting markets, the study shows that relying on overall EO allows to enhance a firm’s growth in a developed market, while focusing on innovativeness and proactiveness when competing in dynamic and hostile environments helps to enhance growth in an emerging market.

4.5 Publication V: Entrepreneurial orientation and firm performance in different environmental settings: contingency and configurational approaches

4.5.1 Background and objective

The fifth publication addresses the sub-question of how is the EO-performance relationship contingent upon different dimensions of the organizational task environment. In the literature, a wide range of contingency factors have been examined in the relationship between EO and firm performance (Rauch et al., 2009; Wales, Gupta and Mousa, 2013). For the industry context, three dimensions of organizational task environment, i.e., munificence, complexity, and dynamism (Dess and Beard, 1984), have been examined for the level of EO each of them requires for enhanced firm performance (e.g., Martins and Rialp, 2013; Rosenbusch, Rauch and Bausch, 2013). Studies are generally consistent in stating that firms operating in dynamic environments benefit from a high EO (Lumpkin and Dess, 2001; Rosenbusch, Rauch and Bausch,
4.5 Publication V: Entrepreneurial orientation and firm performance in different environmental settings: contingency and configurational approaches

2013). However, the role of environmental munificence or—the opposite characteristic, i.e., its hostility—is less defined. Some studies argue for EO to be positively related to firm performance in munificent environments (Kreiser and Davis, 2010), while others give evidence that such a relationship occurs in hostile settings (Covin and Slevin, 1989; Martins and Rialp, 2013). The aim of this article was to add to this discussion on how environmental hostility/munificence moderates the EO-performance relationship by uncovering more complex environmental configurations that may affect the relationship between EO and firm performance. For this purpose, the article focuses on the role of two environmental characteristics, i.e., environmental hostility and market growth, which may be assigned to the opposite ends of the hostility–munificence continuum, and complements the contingency approach (two-way interactions) with a configurational one (three-way interaction). Figure 8 shows the hypothesized model of the EO-performance relationship, which was tackled via two approaches for moderation with environmental hostility and market growth.

![Figure 8. Theoretical model of Publication V: EO and firm performance in different organizational task environments](image)

4.5.2 Results and contribution

The latent variables were verified for reliability and validity, and the hypotheses were tested with the regression analysis on a sample of 163 SMEs from Russia and Finland. The results show a direct and positive relationship between EO and firm performance, supporting the idea that firms receive an overall positive performance outcome by developing their EO. The investigation of the contingency models with two-way interactions of EO and hostility, as well as EO and market growth does not show any significant results. Furthermore, the three-way interaction of EO with hostility and market growth tested in the configurational model was significant, demonstrating that EO-performance relationship could be explained by configurations of variables of the external environment. Compared to other environmental configurations, firms benefit more when developing EO in environments with high levels of both hostility and market growth. However, in favorable non-hostile and high market growth environments, EO adoption leads to a lower firm performance.
This study contributes to the literature by providing a more nuanced understanding of the EO-performance relationship extending the main-effects-only model and the two-way interaction contingency approach. It revealed how the effects of EO on firm performance differed across various configurations of contextual characteristics that were related to both hostile and munificent environments, which extends the discussion on their role in the EO-performance relationship. For managers, this study indicates that although EO has an overall positive effect on firm performance, it becomes more and less beneficial in different configurations of environmental hostility and market growth.

4.6 A summary of the results of the whole study

Table 4 summarizes the main results of all five publications included in the dissertation and their contributions to the whole study. The publications are considered with regard to their focus on complementarity and/or contextualization of strategic orientations. Publication I tests an overall integrative model of all investigated strategic orientations (EO, MO, and LO); Publications III-V focus on contextualization of EO in different country and industry settings; and Publication II deals with both complementarity of EO and MO as well as their contextualization in macroeconomic instability during an economic crisis.
Table 4. The summarized results and contributions of the five publications

<table>
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<tr>
<th>Complementarity of strategic orientations</th>
<th>Contextualization of strategic orientations</th>
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<tbody>
<tr>
<td>EO, MO, LO Economic crisis</td>
<td>Institutional environment EO</td>
</tr>
<tr>
<td>Developed and emerging markets EO</td>
<td>Organizational task environment EO</td>
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<tr>
<th>Main results</th>
<th>Publication I</th>
<th>Publication II</th>
<th>Publication III</th>
<th>Publication IV</th>
<th>Publication V</th>
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<td></td>
<td>A positive individual EO effect, and complementary EO, MO, and LO effect, conceptualized through a higher-order construct, on a firm’s sales growth</td>
<td>A positive EO effect, and a negative interactive EO and MO effect on firm performance irrespective of firms’ financial capital availability during an economic crisis</td>
<td>EO effect on firm performance is positively moderated by a country’s financial system development and supportive culture, and negatively moderated by a country’s legal and entrepreneurship education systems development</td>
<td>EO dimensions are positively related to firm growth in the developed market, and positively moderated by country’s financial system development and supportive culture, and negatively moderated by country’s legal and entrepreneurship education systems development</td>
<td>EO effect on firm performance is positive and highest in the environments with high levels of both hostility and market growth, and negative in the environments with low hostility and high market growth</td>
</tr>
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</table>

| Contribution to the thesis | Conceptual synthesis of EO, MO, and LO, and empirical evidence of their individual and joint performance effects | Testing complementarity of EO and MO within macroeconomic instability | Empirical examination of the role of national-level institutions in EO-performance relationship | Revealing the differences in performance effects of EO in developed and emerging markets | Empirical examination of the role of organizational task environment in EO-performance relationship |
5 Discussion and conclusions

This chapter is devoted to the overall contribution of the dissertation. It provides a synthesis of the individual studies in relation to the existing body of knowledge in the field. First, it answers the research questions, then discusses contributions to theory and practice, and lastly presents limitations and outlines areas for further research.

5.1 Answering the research questions

The main objective of this dissertation was to increase understanding of the role of strategic orientations for firm performance in different environmental contexts. Recent studies have shown that a direct effects model of strategic orientations-performance relationship incompletely accounts for how orientations can lead to superior performance (Hughes et al., 2017), suggesting that contingencies exist and can provide robust evidence and clarification of when strategic orientations actually function. Thus, acknowledging the complex and multifaceted nature of firm’s strategic orientations as well as its surrounding context, this study attempts to integrate and extend the existing knowledge on strategic orientations-performance relationship by focusing on entrepreneurial, market, and learning orientations, as well as several aspects of country and industry contexts. Individual publications, each addressing a particular gap related to complementarity and/or contextualization of fundamental firm-level strategic orientations, help to enhance understanding of the vital contingencies of orientations’ effect on firm performance.

The main research question was formulated as follows: *When and under what conditions do strategic orientations individually and jointly relate to firm performance in different environmental contexts?* Five sub-questions were posed to produce evidence concerning peculiarities of EO, MO, and LO effects on firm performance, shaped by different contextual dimensions, and were separately addressed by five individual publications.

The first sub-question – *How do EO, MO, and LO individually and jointly (complementarily) contribute to explanation of variance in firm performance?* – integrated three strategic orientations to reveal their comparative and complementary performance effects. The results of variance decomposition by performing the commonality analysis revealed that, among the investigated strategic orientations, the variance in firm performance in terms of sales growth was dominantly explained by EO (42%). This result agrees with a number of previous studies, indicating that emphasis on bold, risky innovations and proactive behaviors are principal contributors to a firm’s growth (Covin and Miles, 1999; Eggers et al., 2013). The results further indicate that the individual effects of MO and LO on firm performance in the studied sample did not reach significance. This suggests that these orientations may exert a more complex relationship with firm performance or strongly manifest in other contexts. For joint effects, EO, MO, and LO were found to commonly share a significant portion of
variance (26%) in a firm’s sales growth, although this was smaller than the unique EO effect. The shared variance of strategic orientations, reflected in a higher-order construct “proactive learning culture” (Gnizy, Baker and Grinstein, 2014), was found to be positively related to performance, which reinforces the importance of aggregation of EO, MO, and LO and their complementarity for firm performance. Additionally, the results propose that the manifestation and relevance of strategic orientations may vary across different competitive situations. This study adds to the growing calls for an integrative approach to strategic orientations (Dutta, Gupta and Chen, 2016) by providing a more fine-grained examination of their complementarity. Moreover, combined with comparative insights, it reveals the importance of different orientations’ subsets.

The second sub-question – How do complementary strategic orientations relate to firm performance under economic crisis? – was addressed by investigating EO and MO in the context of the economic crisis in Russia. The results revealed a differential utility of strategic orientations, i.e., a positive EO effect and a non-significant MO effect on firm’s ability to capitalize on the economic crisis. This suggests that emphasizing entrepreneurial activities is valuable during an economic crisis (Pearce II and Michael, 2006; Soininen et al., 2012b), while studying customers and competitors provides less beneficial insights (Grewal and Tansuhaj, 2001) for the sample of Russian SMEs. The results further revealed the negative interactive effect of EO and MO on performance, denoting a substitutive interaction between these strategic orientations during the economic crisis. This result provides evidence that complementarity of EO and MO, which is often highlighted in studies within the context of stable economic conditions (e.g., Atuahene-Gima and Ko, 2001; Boso, Story and Cadogan, 2013), did not manifest during the crisis. With addition of financial capital, it was found that although availability of financial resources is important for firm performance during the crisis, it did not moderate the EO- and MO-performance relationships. Furthermore, the trade-off between EO and MO did not appear to be lessened when financial capital is available. This reinforces the role of EO as opposed to MO as a more beneficial strategic orientation for Russian firms during the economic crisis. These results enrich our understanding of strategic orientations during an economic crisis (Huhtala et al., 2014) by revealing EO and MO separate and joint performance effects, and challenging their complementarity during a crisis.

The third sub-question – How do national-level institutions shape the EO-performance relationship? – was investigated using the global sample of firms across different institutional environments by applying the national business systems framework (Whitley, 1999; 2002). The results confirmed a positive EO-performance relationship across nations (Rauch et al., 2009; Semrau, Ambos and Kraus, 2016). It was further found that the strength of this relationship was enhanced by a country’s financial system development and cultural support toward entrepreneurship. These results demonstrate that financial resources (Wiklund and Shepherd, 2005) and informal cultural incentives (Autio, Pathak and Wennberg, 2013) are important considerations for developing and benefiting from entrepreneurial strategic behavior. The country’s legal system
The fourth sub-question – *What are the differences in the EO-performance relationship in developed and emerging market contexts?* – was explored in the comparative study conducted in Finland and Russia. It was found that, in the developed market of Finland, innovativeness, proactiveness, and risk-taking were positively related to firm performance measured as sales growth. This is consistent with a general observation of EO as an important determinant of a firm’s success (e.g., Anderson and Eshima, 2013; Soininen et al., 2012a). In Finland, no moderating effects were found of the EO dimensions within the industry environment (dynamism, hostility, and heterogeneity). This suggests that the pursuit of entrepreneurial behavior leads to higher growth irrespective of how managers perceive their environment. In the emerging market of Russia, innovativeness was combined with proactiveness in the measurement model, which empirically confirms the view on EO as an exhibition of entrepreneurial behaviors (innovativeness and proactiveness) and managerial attitude towards risk (Anderson et al., 2015). In Russia, the direct performance effects of EO dimensions did not have significance; however, it was found positive moderating effects of innovativeness/proactiveness dimension with environmental dynamism and hostility. The revealed differences in the EO-performance relationship in the developed Finnish and the emerging Russian markets were attributed to differences in the institutional environment and national culture of these two countries. In particular, it is possible that less developed institutional and more risk-averse environment of Russia may contribute to the managers’ general unwillingness to behave entrepreneurially. However, in the environments perceived to be more dynamic or hostile, EO could help to overcome environmental constraints and meet the rapidly changing market and technology demands. This study adds to the research on EO in emerging economies (Hughes et al., 2017; Lindsay et al., 2014) by comparing and contrasting its performance implications with those in the developed market, while accounting for various dimensions of industry context.

The fifth and final sub-question – *How is the EO-performance relationship contingent upon different dimensions of the organizational task environment?* – was addressed by
examining the role of environmental hostility and market growth separately and in configuration in shaping the relationship between EO and firm performance. Unlike the previous study, in which industry environment was investigated within a broader developed and emerging market contexts, this study was not focused on establishing differences between the contexts but rather on exploring the beneficial relationships on average by pooling across all observations in Finnish and Russian samples (Engelen et al., 2015). Similar to previous research, the results confirmed a positive performance effect of EO (Wales, Gupta and Mousa, 2013). The contingency models of the EO-performance relationship did not support the moderating effects of hostility and market growth. Furthermore, the configurational model provided significant insights on EO-environment fit by revealing that performance benefits from adopting EO are highest among firms operating within hostile environments with a high market growth for their offerings compared to other environmental configurations. However, it was shown that in more favorable environments with low hostility and high market growth, entrepreneurial behavior appeared to not be conducive for firm performance and better outcomes could be achieved with a lower EO level. These results contribute to the discussion on EO in hostile and munificent environments (Rosenbusch, Rauch and Bausch, 2013) by uncovering complex configurations of environment and strategy variables.

The results related to the five sub-questions constituted the foundation for answering the main research question: When and under what conditions do strategic orientations individually and jointly relate to firm performance in different environmental contexts? The revealed strategic orientations, their combinations, and alignment with different contextual dimensions, which result in improving firm performance, are shown in Figure 9. To summarize, the results of the dissertation show that EO, MO, and LO, which have different individual performance effects, exert significantly shared complementary effect on firm performance. However, the relative weight of these strategic orientations and their complementarity in relationship with firm outcomes are the function of firms’ surrounding environments. In particular, it was shown that EO and MO have substitutive rather than complementary relationship under severe environmental conditions such as an economic crisis. For EO, the publications yielded generally consistent results; its positive performance effect was revealed in most studies and particularly under less favorable external environments such as the crisis context, dynamic, and hostile industry contexts. It was found that entrepreneurial behavior is beneficial for firm performance in the environments characterized by both hostility and market growth, an observation consistent with the results on moderating effect of hostility in the growing emerging market. The results also report the importance of financial resources and cultural support for developing entrepreneurially oriented strategy and deriving benefits from it. Furthermore, counter-intuitive results on the role of legal system and entrepreneurship education were found, as well as potentially more complex effects of market and learning orientations, which do require further investigation.
5.2 Theoretical contributions

The principal contributions of the study are threefold. First, it reveals and compares unique and shared contributions of entrepreneurial, market, and learning orientations to variation in firm performance. Second, it provides empirical support for complementarity of strategic orientations and illustrates that their complementary relationship with firm performance outcomes is context dependent. Third, in relation to
the EO research stream, it specifies and provides empirical evidence of how the relationship between EO and firm performance is influenced by country, institutional, and industry contexts. The theoretical contributions of the dissertation can be attributed to several research streams. The principal contribution relates to research on strategic orientations within strategic management, entrepreneurship, and marketing literatures. The implications from this study more broadly inform research on complementarities in organizations and contextual studies in management research. In the following section, the theoretical contributions and implications are discussed for each research stream.

5.2.1 Implications for strategic orientation research

The dissertation contributes to the existing literature on strategic orientations by integrating three fundamental strategic orientation types into one theoretical model and comparing and contrasting their individual and joint effects on firm performance. By partitioning the variance in firm performance attributable to EO, MO, and LO, the study has shown how much explanatory power each strategic orientation has uniquely and shares with other orientations. Unlike previous studies on combinations and complementarities of strategic orientations (Deutscher et al., 2016; Dutta, Gupta and Chen, 2016; Gnizy, Baker and Grinstein, 2014; Ho, Plewa and Lu, 2016), this study decomposes and quantifies the unique and shared effects of EO, MO, and LO, providing a more fine-grained approach to interrelations between these strategic orientations. By investigating the complementarity and shared variance of strategic orientations, aggregated in a higher-order construct, i.e., proactive learning culture (PLC; Gnizy, Baker and Grinstein, 2014), the study reinforces the importance of a firm’s ability to simultaneously manifest multiple strategic orientations. Furthermore, by observing the differential role of EO, MO, and LO in firm performance and discussing it in relation to the results of previous studies (Gnizy, Baker and Grinstein, 2014), the dissertation proposes that the relationship between these orientations and firm performance is nuanced and context dependent. Therefore, additional studies are required to study which dimensions of the aggregate PLC construct matter the most for which environments.

Moreover, this study contributes to the strategic orientation research by contextualizing strategic orientations accounting for different country and industry factors (Rosenbusch, Rauch and Bausch, 2013; Saeed, Yousafzai and Engelen, 2014). In particular, by examining strategic orientations during the period of an economic crisis, across national-level institutional contexts, in developed and emerging markets, and contingent upon different dimensions of organizational task environment, the study clarifies and advances the understanding of how firms may effectively posture in different environmental settings to achieve higher performance.

In terms of crisis management, the dissertation provides an empirical evidence of how entrepreneurial and market orientations relate to a firm’s ability to manage the challenges and benefit from potential opportunities emerging during an economic crisis. Departing from prior research investigating the negative consequences of economic
5.2 Theoretical contributions

This study draws attention to the beneficial strategic approaches in a crisis context. By analyzing the performance effects of EO and MO separately and in combination and accounting for availability of financial capital during the crisis, it emphasizes a need to adopt an integrative approach and construct more specified models including multiple strategic and environmental variables. The empirical evidence of substitutive relationship between EO and MO during times of crisis questions the conventional wisdom pertaining to firms’ complementary strategic orientations that were previously observed in more stable economic contexts (Boso, Cadogan and Story, 2012, 2013; Ho, Plewa and Lu, 2016).

Furthermore, the dissertation offers implications more specifically to the EO research stream by revealing how institutional factors affect the relationship between EO and firm performance. By applying the national business systems framework (Whitley, 1999; 2002), it integrates examination of the development of a legal system, financial system, entrepreneurship education, and cultural norms across countries. Moving beyond focusing on separate facets of formal and informal institutional environment (Roxas and Chadee, 2012; 2013), this approach to national-level institutional context provides a more holistic and comprehensive view of the country’s institutions that frame a firm behavior and its outcomes.

The results presented in the dissertation advance cross-country studies on EO-performance relationship by analyzing one of the most globally expansive samples, collected on this phenomenon from 41 countries, compared to 5 (Marino et al., 2002), 7 (Semrau, Ambos and Kraus, 2016), or 9 (Kreiser et al., 2013) countries analyzed previously in primary studies. This study moves forward the comparative research on EO in developed and emerging market contexts by revealing the differences in the construct’s structure and its relationship with firm performance in these contexts, attributing them to cognitive traits of the decision-makers and variation in the countries’ institutional development and cultural characteristics.

By incorporating different dimensions of organizational task environment to the analysis of the EO-performance relationship, the study considers strategic fit from both contingency and configurational approaches (Engelen et al., 2015; Wiklund and Shepherd, 2005) to understand the complexity of the EO-environment interaction. It has been shown how EO affects firm performance across various environmental configurations, representing hostile and munificent environments, which have raised some inconclusive results and have not been previously studied together in EO research (Kreiser and Davis, 2010; Martins and Rialp, 2013; Rosenbusch, Rauch and Bausch, 2013). By revealing significant configurations of EO and environmental variables, this study emphasizes the importance of simultaneously considering multiple contextual elements in decision-making processes and research.
Discussion and conclusions

5.2.2 Implications for organizational complementarity research

The dissertation informs research on complementarities in organizations by combining two different views on complementarity and methodologically applying commonality analysis as a technique for testing complementarity. In particular, complementary strategies in previous studies have been considered as separate pieces “serving to fill out or complete” each other (Helfat, 1997, p.339), or as mutually reinforcing factors that create synergistic effects on firm performance (Tanriverdi and Lee, 2008, p.384). Researchers have focused on correlations between strategic orientations and the patterns of their joint adoption or looked at performance differences from adopting complementary strategic orientations (Brynjolfsson and Milgrom, 2012). The results of this study demonstrate that two perspectives on organizational complementarity are not mutually exclusive. Indeed, it was shown that EO, MO, and LO contribute both individually (independently from each other) and jointly (as shared effects) to firm performance in terms of sales growth.

Methodologically, in this dissertation, commonality analysis was applied and proposed as a relevant approach to test complementarity because it allows to capture performance effects from changes in one variable when it is combined with changes of the other (Ennen and Richter, 2010). This approach is different from other methods that are used to establishing complementarity. Commonality analysis provides information about the variance uniquely explained by each of the variables and their shared contribution to the outcome (Capraro and Capraro, 2001). Compared to regression, in which the performance effects from predictors are sequentially analyzed and each variable adds predictive power, commonality analysis involves a simultaneous estimation of the effects on a dependent variable and yields the explained variance that is shared between the variables. Moreover, shared effects are different from interaction effects for their interpretation and indicate performance outcomes from mutual changes in the variables rather than their different (high/low) levels (Lomberg et al., 2017). Compared to SEM, which allows to estimate commonly shared variance between the variables composing a higher-order construct, commonality analysis adds to this identification of other types of variance (bilaterally shared and unique), providing a more consolidated and extended approach. Commonality analysis can be more broadly applied to other complementary concepts in management and specify the extent to which variance in firm performance can be explained by their unique and shared effects, as well as examine the constructs in different settings. Moreover, commonality analysis can be used in studies as a follow-up analysis to improve the understanding and interpretation of data.

Furthermore, the results of this study demonstrate contextual dependency of organizational complementarities and provide empirical evidence of substitutive effects, which are less prevalent in management research (Ennen and Richter, 2010). It has been shown that the same factors can complement each other in one context and act as substitutes in other contexts, which reinforces the importance of considering contextuality when investigating relationships between these factors. Moreover, the complementarity relationship is generally assumed to be symmetric with all elements
5.2 Theoretical contributions

being considered equally important for firm performance (Tanriverdi and Lee, 2008). This study, however, has demonstrated differential contributions of strategic orientations to sales growth. Therefore, the relative importance of activities and the nature of their complementarity may not be an inherent property of these activities but a function of other environmental factors (Porter and Siggelkow, 2008). Consequently, two activities might be complementary in one firm, context, or time, and substitutes in another, and investigation of complementarities on various subsets of data may provide additional insights and establish boundary conditions to these relationships.

5.2.3 Implications for contextual research in management

The dissertation answers the call for greater contextualization of research in management, marketing, and entrepreneurship (Bamberger, 2008; Wales, Gupta and Mousa, 2013; Zahra, Wright and Abdelgawad, 2014) by exploring the nature of the relationship between strategic orientations and firm performance in different contexts and informing scholars about critical industry- and country-wide factors that may contribute to more or less benefits from exhibition of strategic orientations. While a majority of studies on strategic orientations have been conducted in a single country (Boso, Story and Cadogan, 2013; Ho, Plewa and Lu, 2016; Lonial and Carter, 2015; Nasution et al., 2011), this study utilized three different datasets, two of which were collected from multiple countries to establish differences as well as explore common core relationships across contexts. By doing so, the study allows to increase applicability of the results to particular circumstances, and also to capture the essence and determine generic relationships that are applicable to different settings.

Previous studies have examined the interface between theory and context as contextualizing theory, or making it more context sensitive (theories in context) and theorizing about the effects of context (theories of context) (Whetten, 2009). Falling mainly within the first stream, the results of this research have demonstrated how the construct’s structure and focal relationships vary in different contexts, building boundaries of generalizability and providing more precise models and robust tests of theories. At the same time, recognizing that all phenomena can be context dependent, the results of this study have also shown that some relationships may be consistent for a wide variety of settings. For example, EO was found to have a positive performance effect across different national contexts, and particularly in less favorable environments ranging from dynamic and hostile industrial contexts to a more severe economic crisis period. Overall, by contextualizing strategic orientations, this study helps to enhance understanding of how existing relationships may be context-dependent across space and time. It reveals specific situational factors that shape performance effects of strategic orientations, offering insight into how firms may internally organize and externally position themselves to match the characteristics of their surrounding environment.
5.3 Practical implications

Understanding the effects of decisions made by managers in selecting strategic orientations for their firms is crucial for management practice because such strategic decisions affect firm performance. For managers, this study specifies which strategic behaviors of their businesses, i.e., entrepreneurial, marketing, and/or learning, and in which situations are beneficial for performance, as well as the circumstances that may inhibit the positive performance outcomes of strategic orientations in terms of both industry and country characteristics.

Generally, it is suggested that for managers of firms, who are focused on achieving performance goals and, in particular, sales growth, it would be beneficial to focus primarily on innovative, entrepreneurial activities by introducing new products, processes, and business models, anticipating future demand, actively entering new product/market segments, and embracing risky projects. Firm growth seems to be largely due to entrepreneurial orientation; however, this does not mean that market and learning orientations do not have value for SMEs. In fact, the question, which strategic orientation matters the most, is context dependent; however, the simultaneous pursuit of entrepreneurial, marketing, and learning behaviors is generally important in many settings as they jointly propel firms toward new marketplace opportunities. For SMEs, lacking the advantages related to economies of scale and strong resource base, the development of intangible abilities and behaviors may become a source of competitiveness in the market. Complementarity of strategic orientations imposes more difficulties in observing and imitating by competitors because strategy-specific activities are inherently more challenging to imitate and complex interactive activities rather than individual actions must be replicated (Porter and Siggelkow, 2008). If only few elements are copied, no benefits may be generated because of inconsistencies. Moreover, in the presence of contextuality, managers who observe that activities are complementary for a competitor should not make the same conclusions for their firm. However, it should be acknowledged that because of their interrelatedness, changing strategic orientations for adaptation to the environment may also be challenging. Changing only some practices may be insufficient, while a simultaneous change of many practices is costly, which makes firms introduce changes in phases (Brynjolfsson and Milgrom, 2012). Thus, before adopting a new technology or training program, managers should explicitly consider the situation from the perspective of complementarities to make informed decisions about the optimal pace, sequence, and feasibility of change efforts. Just as complementarities may create organizational inertia to impede change, they may also create momentum for a cycle of change if relevant practices are changed first (Brynjolfsson and Milgrom, 2012).

The study further suggests a comprehensive analysis of the environment in terms of characteristics such as market dynamics and threats, financial resource availability, regulatory structures, cultural values, and other factors. This, in turn, helps make a thorough choice of a firm’s strategic behavior in order to take advantage of opportunities and be aware of challenges for achieving better performance. In particular,
5.4 Limitations and suggestions for further research

when an economic crisis occurs, managers should be concerned with the detrimental effect of simultaneously implementing both entrepreneurial and market orientations and recognize their competing relationship in such a situation. In this manner, it can be suggested that pursuing a narrower strategic perspective by focusing on entrepreneurial activities during a crisis is more beneficial than attempting to additionally follow unstable market needs, a prescription that holds regardless of financial capital availability.

Furthermore, there is a need to align firm’s entrepreneurial activities to external business settings and concurrently analyze multiple environmental characteristics. While an entrepreneurial orientation overall enhances firm performance, it should not be adopted in every situation. Specifically, returns from firm’s entrepreneurial activities are more pronounced in countries with more developed financial institutions and cultural support for entrepreneurship, and with less advanced entrepreneurship education and comprehensive legal structures, which could be accounted for by managers when internationalizing their businesses. Furthermore, in developed markets, such as Finland, relying on entrepreneurial orientation in general will allow managers to stimulate firm growth, whereas in emerging markets, such as Russia, it would be more beneficial to focus on strong innovative and proactive behaviors when competing in dynamic and hostile environments and make less entrepreneurial efforts in more stable environments. In general, entrepreneurial behavior would be more valuable in more challenging environments, while less advantageous in favorable markets.

This dissertation has implications for policymakers, who focus on stimulating the development of entrepreneurship in a country. The study emphasizes the importance to consider the role of existing institutions in firms’ ability to leverage their entrepreneurial orientation for growth and profitability. In particular, among other initiatives, considerable attention is required to design programs that enable funding opportunities or easier access to credit for firms, as well as promote positive perception of entrepreneurship in a society to create informal incentives for entrepreneurial activity. Moreover, the adverse consequences of overregulation of economic relationships should be recognized and avoided. In particular, strengthening legal institutions in lower income countries facilitates the efficacy of firms’ entrepreneurial orientation due to securing rents from entrepreneurial actions. However, in higher income countries with well-functioning institutions, additional institutional development might complicate regulations and hamper entrepreneurial initiatives by imposing constraints on economic activity. For entrepreneurship education, it is important to ensure the development of quality programs and increase training of venture management skills to meet the requirements of a competitive economy.

5.4 Limitations and suggestions for further research

This dissertation has several limitations that should be discussed and considered when interpreting its results and suggesting avenues for future research.
First and foremost, the data on strategic orientations and firm performance were collected in a single point of time, which restricts the ability to make inferences about causality. Moreover, the study relied on self-reported questionnaires and subjective assessment of independent and dependent variables by single key informants, which creates concerns about common method variance. A growth-based performance indicator was used for most empirical studies, and so the beneficial types of strategic orientations to attain performance goals may differ depending on the nature of the dependent variable. Hence, application of a single performance indicator limits the ability to make conclusions about overall performance, and the effects of strategic orientations should be considered for particular performance measures. Although the testing of common method bias was performed, further research is encouraged to include alternative measures of firm performance based on objective data. Moreover, a longitudinal design should be applied to determine the performance effects of strategic orientations from a long-run perspective and assess possible changes in the relationships between strategic orientations over time as a part of the developmental process of the firm.

Furthermore, the dissertation is limited to the investigation of SMEs, which creates a particular context for this study; however, this does not allow comparing and theorizing about the role of firm size and/or liability of smallness for determining a firm’s strategy and its relationship with performance. The analysis of and theorizing about both small, medium, and large firms in future studies would provide much needed comparative insights. In particular, because of their limited research and development facilities, usage of less marketing research, and simpler coordinating mechanisms, strategic orientations may act on performance differently for SMEs as compared to larger organizations.

Moreover, this study is mainly based on a sample of firms collected from Finland and Russia, which limits the generalizability of the results to other countries. Future research will benefit from replications conducted on different samples to enhance the external validity of the results and identify potential contextual peculiarities. A cross-country exploration of strategic orientations and their combinations may extend the application of results obtained in this study to other countries and better specify the nature of strategic orientations-performance relationship in different macro contexts. For the GUESSS dataset, while it provides rich data on entrepreneurial activity in many countries, the survey was distributed to students from universities and for studying the firm-level phenomenon, it does not allow determining and verifying which entities were exactly being understood and described as firms. Therefore, to verify the results further examination of EO across various institutional contexts is suggested.

For building future models that integrate multiple strategic orientations, this study suggests to further analyze configurations of EO, MO, and LO to reveal the different types of orientations, which are more pronounced and beneficial under various environmental conditions. However, the observed interrelatedness and complementarity of strategic orientations does not mean that future studies should not focus on
5.4 Limitations and suggestions for further research

investigating a particular orientation in isolation. Nevertheless, when doing so and if the data permit, it might be useful to compare and control for other orientations to provide a more robust analysis and increase confidence in the strength of the study’s results. Furthermore, in addition to analyzing whether or not and under which circumstances complementarities exist, an interesting question to investigate is through which mechanisms they work. Addressing the numerous calls for mediation research (Wales, 2016), future studies are encouraged to examine mediating influences that translate the effects of strategic orientations into firm performance. Moreover, further understanding of “how and why” of strategic orientations can be provided by qualitative studies that may follow the emergence, manifestation, and attenuation of strategic orientations within firms. Additionally, a potential avenue for future studies would be investigation of antecedents of strategic orientations to determine which factors lead to the formation of different types of orientations at a firm. These studies could provide deeper explanations of why firms differ in their strategic orientations and effectiveness of their orientations, as well as reveal the ways and practices of how to nurture and implement strategic orientations to improve firm performance.

Future studies may also consider adopting a more holistic perspective to firms’ strategic behavior by including other types of strategic orientations in the analysis (Grinstein, 2008; Sainio, Ritala and Hurmelinna-Laukkanen, 2012). Moreover, they may examine the role of other aspects of the external environment such as competitive intensity, market and technological turbulence, political instability, and/or cultural characteristics, which may specify the relationship between strategic orientations and firm performance. In addition to the external environment, the role of the internal environment, such as organizational structure, leadership style, and/or managerial networking may be of importance when analyzing performance outcomes of strategic orientations. Examining these environmental aspects may further improve our understanding of the contextual determinants of strategic orientations-performance relationships and help provide new insights to the question of boundary conditions for these relationships.
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Orienting toward sales growth? Decomposing the variance attributed to three fundamental organizational strategic orientations

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ABSTRACT

While firm strategic orientations have received considerable attention, most research has focused on singular orientations without considering their complementarity for firm’s outcomes. In this study, we decompose the unique and complementary variance of several strategic orientations — market (MO), entrepreneurial (EO), and learning orientations (LO) — on firm sales growth. Our investigation of the individual unique effects of these orientations reveals that, within our cross-national random sample of 221 firms from Finland and Russia, sales growth is principally driven by EO. Second, our results show that the complementary or shared effects of EO, MO, and LO explain a significant portion of the variance in sales growth. Building upon past research, we offer evidence that a higher-order construct—proactive learning culture—is supported at the intersection of these fundamental strategic orientations with important implications for future scholarship examining multiple strategic orientations.

1. Introduction

Given the ever-evolving nature of the economic environment, firms are constantly striving for new opportunities in the marketplace so that they can identify paths to grow and thrive (Bhuiyan, 2005). To this end, much attention is focused on firm’s strategic orientations, or the strategic philosophies, processes, and behaviors of a company that enable the organization to achieve superior performance (Gatignon & Xuereb, 1997; Noble, Sihn, & Kumar, 2002). Prior literature suggests that several overarching strategic orientations exist. These orientations emphasize a market focus and providing superior value for customers (market orientation (MO); Narver & Slater, 1990), an entrepreneurial focus that entails developing and launching new products and services (entrepreneurial orientation (EO); Covin & Slevin, 1989), or the creative focus that entails developing and launching new products and services (market orientation (MO); Narver & Slater, 1990). 

The development of strategic orientations within a company can have a significant effect on their performance. While the majority of the literature has focused on the effects of a single strategic orientation in isolation (e.g., Keith & Stephen, 2005; Kirca, Jayachandran, & Bearden, 2005; Rauch, Wildland, Lumpkin, & Frese, 2009), previous studies observe that a single orientation alone may be insufficient for the effective achievement of firm performance (Bhuiyan, Menguc, & Bell, 2005; Hakala, 2011). That is, a combination of strategic orientations might enable organizations to perform better (Deutscher, Zephan, Schwenk, Baum, & Kubat, 2016; Gunzy, Baker, & Grinstein, 2014; Lounial & Carter, 2015). Yet, our understanding of multiple strategic orientations and their combination is still in its early stages (Hakala, 2011), with many approaches being considered. For instance, studies have examined separate individual effects of different strategic orientations on firm performance (e.g., Farrell & Ozkowiski, 2002; Knopp, Lindsay, & Shoham, 2006; Laukkonen, Nagy, Hirvonen, Reijonen, & Pasanen, 2013), joint complementary effects of orientations tested as interactions (e.g., Atuahene-Gima, Slater, & Olson, 2005; Boso, Cadogan, & Story, 2012) and higher-order constructs (e.g., Hult, Ketchen, & Arrfelt, 2007; Lounial & Carter, 2015), configurations of orientations (e.g., Hakala & Kohtamaki, 2011; Hu, Pleva, & Lu, 2015), and mediating effects between orientations (e.g., Dutta, Gupta, & Chen, 2016; Nguyen, Barrett, & Fletcher, 2006). While these approaches have provided a wealth of

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At the heart of this research is the question: How do firms best strategically orient themselves to achieve sales growth? To answer this question, we decompose the variance across three fundamental organizational strategic orientations. Our research question then may be more specifically stated as: How do market, entrepreneurial, and learning orientations individually and jointly (complementally) contribute to the explanation of firms’ total variance in sales growth? Answering this question, our research contributes to the existing literature on strategic orientations in several ways. A principle contribution is that beyond the combined effects of market, entrepreneurial and learning orientations on firm performance (Deutscher et al., 2016; Dutta et al., 2014; Gnizy et al., 2013; Hult, Snow, & Kandemir, 2003; Lonti & Carter, 2015), we assess performance (i.e. sales growth) variance attributable to unique and bilaterally shared effects. This analytic approach is based on commonality analysis (Lombberg, Urban, Stockmann, Marino, & Dickson, 2017) and provides much needed comparative insights into the relationships between these strategic orientations and firm performance. Thereby, we estimate both individual and joint contributions of market, entrepreneurial and learning orientations to superior firm sales growth.

A second principle contribution stems from our investigation of the complementarity of market, entrepreneurial, and learning orientations. Complementarity strategies have previously been viewed either as “independent pieces that ‘complete’ each other” or as mutually dependent practices that reinforce each other and create synergistic performance effects (Taussig & Lee, 2008, p. 384). Our research examines support for the conceptual assertion of a higher-order dynamic capability at the intersection of the three strategic orientations, termed proactive learning culture (PLC) by Gnizy et al. (2014), and viewed as a “three-legged” bench in which each of the strategic orientations represents an essential ‘pillar’ or ‘leg’ and, at the same time, a source of synergistic effects. Methodologically, Gnizy et al. (2014) test alternative models and find that PLC explains variance in the success of foreign launch equal to or greater than that explained by its first orders (MO, EO, and LO). We go one step further and illustrate how this variance can be attributed to unique or shared effects of the three dimensions. Additionally, we consider the concept of PLC within a different setting than Gnizy et al. (2014) and propose that the relative weight of these orientations in their relationships with firm outcomes is a function of firms’ competitive situations.

An additional contribution to the literature is that we extend and apply commonality analysis within a unique, multi-orientation research setting and demonstrate how the analytical technique can provide much needed insights within strategic orientation research (Lombberg et al., 2017). In doing so, we expect future research to be more cognizant of commonality analysis as a tool to compare the effects of multiple strategic orientations, and investigate higher-level dynamic capability-based phenomenon such as PLC.

The paper proceeds as follows. First, we develop our conceptual framework and research hypotheses. Then, we describe our sample, data collection and measurement approach. Next, we present our analysis, empirical findings, and robustness checks. Finally, we discuss our study findings and their meaningful implications for future research.

2. Theory and research hypotheses

2.1. Individual effects of strategic orientations on firm performance

The notion of a firm’s strategic orientation has attracted attention of scholars from marketing, management, entrepreneurship, and other academic fields. Strategic orientation describes the organizational decision-making tendencies and principles of a company, which direct its activities and generate behavior, with the intent of achieving superior firm performance within the marketplace (Gatignon & Xuereb, 1997; Hakala, 2011; Noble et al., 2002). Prior research distinguishes between several different types of strategic orientations, including market orientation (MO), entrepreneurial orientation (EO) and learning orientation (LO) (Hakala, 2011; Hult, Hurley, & Knight, 2004). We now briefly examine each orientation in turn:

2.1.1. Market orientation

MO refers to strategic inclination and firm-level activities directed at the generation of superior value for customers. A market-oriented firm is one which “most effectively and efficiently creates the necessary behaviors for the creation of superior value for buyers and, thus, continuous superior performance for the business” (Narver & Slater, 1990, p. 21). Prior research recognizes two main conceptualizations of MO (Gupta, Nast, & Dutta, 2017): (a) relating to organization-wide generation and dissemination of market information and accompanying organizational responses (Kohl & Jaworski, 1990), and (b) combining dimensions of customer orientation, competitive orientation, and interfunctional coordination (Narver & Slater, 1990). Based on these characteristics, previous studies predominantly confirm a positive relationship between MO and business performance (Dutta et al., 2015; Lafferty, Holt, & Thomas, 2001). Customers are more likely to be satisfied with products and services, provided by a market-oriented firm (Cooper, 2009), and increase their loyalty to the company. By gathering, disseminating, and employing customer and market information, MO enables firms to adjust their operations to target markets, anticipate and respond to customer needs, and build competitive advantage (Atuahene-Gima et al., 2005).

2.1.2. Entrepreneurial orientation

EO refers to organizations’ strategic decision-making tendencies and behavioral actions, most commonly characterized in terms of innovativeness, proactiveness and risk-taking (Covin & Lumpkin, 2011). Entrepreneurial firms engage in exploration of new products and services, and embrace forward-looking and somewhat risky courses of action (Rauch et al., 2009). Furthermore, EO describes a firm’s tendency to experiment, generate new ideas, commercialize them into new products and services, and make substantial investments in research and development (Medini, Petruzzelli, & Albu, 2015; Lechner & Gudmundsson, 2014; Lumpkin & Dess, 1996, Vij & Bodh, 2012). Overall, the adoption of EO, through the exhibition of innovative, proactive and risk-taking activities, can enable and help identify new ways of achieving firm performance (Caruana, Ewing, & Ramses, 2002; Gnizy et al., 2014; Rauch et al., 2009).

2.1.3. Learning orientation

LO is conceptualized as a “set of organizational values that influence the propensity of the firm to create and use knowledge” (Sinkula et al., 1997, p. 309). It represents the degree to which organizational learning and knowledge integration can occur within a firm, and beliefs and existing assumptions can be challenged. Widely applied components of LO include a commitment to learning, shared vision and open-mindedness (Sinkula et al., 1997). An additional dimension of intra-organizational knowledge sharing has also been examined (Cavusgil, Cavusgil, & Zhao, 2002). Learning orientation is related to the firm’s propensity to continuously question existing assumptions and beliefs about its business and environment, and the ability to deliver organizational change. Past research demonstrates that high-LO firms are better able to adapt their organizational capabilities to the demands of the external environment when developing products and services (Cooper & Carter, 2015; Wang, 2008). Learning from their environment and the opportunities which may exist, these firms are able to provide rapid solutions to different environmental challenges. Thus, a learning orientation helps firms create sustainable competitive advantages and

Several studies have examined market, entrepreneurial, and/or learning orientations as potentially complementary phenomena (Emity et al., 2014; Lonial & Carter, 2015). In a few instances, the comparative strength of the orientations on firm performance has also been examined and produced mixed results. Whereas EO and MO were found to have a mostly positive association with performance (e.g., Hult et al., 2003), LO's performance effects seem to be less stable (e.g., Krupp et al., 2006; Luukkanen et al., 2013). In one notable example, Deutscher et al. (2016) observed that MO is the most relevant variable for explaining firm growth among high-technology firms. This study arguably provides an excellent example of the notion of orientation differentiation as discussed by Dess, Lumpkin, and O'Leary (2012), which posits that with increasing competition, firms are likely to de-emphasize the strategic orientation their principal rivals pursue. A certain orientation, such as EO, may be less likely to provide a stable source of competitive advantage among such high-tech firms when it provides little differentiation (Gupta & Gupta, 2015) and thus rather constitutes ‘table stakes’ or a necessary, but insufficient, condition for competitive advantage. In a similar vein, Kumer, Jonen, Venkatasesan, & Leone (2011, p. 17) ask whether “as more firms in an industry become market oriented, does a firm's market orientation transform from being a success provider to being a failure preventer?”. In response, we argue that instead of relying on one single strategic orientation, a judicious fusion (or amalgamation) of various orientations may provide the strongest basis for increases in firm performance and growth.

In general, among the three fundamental strategic orientations investigated in this study, we expect EO to provide the dominant explanation as to why some firms achieve average sales growth. While the intersection of these orientations may also considerably matter, we posit that among the strategic orientations investigated in this study, EO, and the risky, pioneering innovation which it entails, is the principle orientation responsible for firms' sales growth. That is, bold, pioneering innovation is a prominent aspect of EO which enables organizational growth (Gavin & Miles, 1999). As such, EO may be viewed as a growth-focused orientation which engenders variance in firms' performance and enables some firms to identify fruitful growth opportunities (Wildman & Shepherd, 2011). Indeed, prior research observes a strong and consistent effect of EO on growth (e.g., Brouthers, Nakah, & Demetratos, 2015; Cañellas & Moreno, 2010; Eggem, Kraus, Hughes, Laraway, & Snyercsik, 2013; Grande, Madson, & Borch, 2011; Shirokova, Bogatyrev, Belinaeva, & Puffer, 2016; Soininen, Martikainen, Paaamalaite, & Kyhlikoski, 2012).

All else being equal, we posit that risky, pioneering innovation within an organization's strategic orientation will explain more variance in sales growth than market or learning orientations which help firms understand, learn, and target their efforts successfully. While EO is a costly, risky orientation that may exhaust firm resources, with more product-market launches, organizations have additional chances of being lucky, and striking a chord with customers in a new, and open competitive space that offers superior growth potential (Wildman & Shepherd, 2011). Thus, we argue that EO provides the ‘high-risk, high-return’ product-service innovation and new market entries necessary for firms to identify ‘home-runs’, along with ‘base-hits’ which keep firm sales growing (Gavin & Läppinkä, 2011). Market and learning orientations help firms grow sales by understanding and better learning about customers, competitors, and trends, however ‘high-risk, high-returns’ pioneering innovation, is likely to produce stronger gains in sales growth. Thus, we assert that across orientations, EO is most directly responsible for firms' sales growth.

Hypothesis 1. Ceteris paribus, entrepreneurial orientation, rather than a market or learning orientation, provides the dominant explanation of variance in sales growth.

2.2 Performance effects from the complementarity of strategic orientations

Prior studies suggest that different combinations of orientations may enable firms to perform better as compared to when only a single orientation is emphasized in isolation (e.g., Boso et al., 2012; Farrell, 2009; Hu et al., 2016). These results align with the notion of complementarity which entails a “beneficial interplay of the elements of a system where the presence of one element increases the value of others” (Emmen & Richter, 2010, p. 207), and a complementary set of resources can create additional value not captured by any one resource in isolation ( Tartivverdi & Venskutonis, 2005). Similarly, each strategic orientation captures different mechanisms for sustaining firm sales growth, and a combination of orientations may create more value compared to any individual orientation.

In explaining firm strategic orientation, scholars have pre-dominantly utilized the resource-based view (RBV) to highlight strategic orientations as rare, valuable, inimitable and idiosyncratic organizational resources which may work in harmony to create superior firm performance and growth (Barney, 1991; Lonial & Carter, 2015). An extension of RBV, the dynamic capabilities perspective conceptualizes strategic orientations in terms of firm’s “capacity (1) to sense and shape opportunities and threats, (2) to seize opportunities, and (3) to maintain competitiveness through enhancing, combining, protecting, and, when necessary, reconfiguring the business enterprise's intangible and tangible assets” (Teece, 2007, p. 1319). In line with the RBV perspective, we recognize that strategic orientations such as EO, MO, and LO may work together to help firms recognize and seize opportunities.

Many scholars (e.g., Baker & Sinkula, 2009; Wildlund & Shepherd, 2015) have argued that firms need to adopt an integrative approach to their strategic postures as relying on only one type of orientation may create opportunities with limited potential and durability. In this vein, many studies have focused on the interrelatedness and complementarity between EO and MO (Atutshene-Gima & Ko, 2001; Bhuian et al., 2005; Slater & Narver, 1995) as sources of competitive advantage and superior performance. According to Slater and Narver (1995), MO provides an effective foundation for organizational learning and generates performance when it is complemented by entrepreneurship. MO alone may inadvertently focus firms' efforts on current customers and competitors, thus, limiting attention to emerging markets and leading to adaptive learning within traditional boundaries. With the addition of EO, greater consideration is given to more imaginative and innovative product-markets. However, as innovative new product-market offerings carry a high risk of market failure, we believe that the adaptiveness of MO needs to be coupled with the generative nature of EO. Supporting this argument, Atutshene-Gima and Ko (2001) empirically observed that EO and MO can be integrated as an entrepreneurial marketing approach that drives new product performance.

Similarly, a synergistic relationship between MO and LO has been evidenced (i.e., Baker & Sinkula, 1999) in which LO is viewed as the engine behind MO allowing to constantly examine the quality of information collection, interpretation and storage functions and the variability of the dominant logic that guides the entire organizational adaptive process. More broadly, the relationships between MO and EO, as well as MO and LO have been supported within a meta-analysis conducted by Granovetter (2008). The relationship between EO and LO has also been evidenced in the literature with LO representing an important, complementary strategic orientation for firms striving to achieve more from their entrepreneurial efforts (Gupta, Dutta, & Chen, 2014; Liu, Luo, & Shi, 2002).

Bringing all three together within the same study, Deutscher et al. (2016) observe that a configuration of EO, MO, and LO drives organizational growth among high-tech firms. Lonial and Carter (2015) similarly observe all three, taken together, to have stronger effects with firm performance than when each orientation is considered in isolation. In this vein, the work of Li, Wu, and Liu (2010) observes that EO and MO are also complementary during the knowledge acquisition process.
that occurs during cross-border outsourcing. Thus, while all three strategic orientations are important for firm's growth and performance, it is their combination which arguably significantly enhances firms' chances of growth and success (Deutscher et al., 2016; Gnizy et al., 2014; Lonial & Carter, 2015).

An exploration-exploitation lens provides another perspective from which to consider the mutual criticality of all three strategic orientations. It has long been argued that EO captures an exploratory orientation emphasizing bold innovations (Wiklund & Shepherd, 2011), whereas MO is focused more on exploitative possibilities derived from market gaps (Morgan & Siverson, 2008). Moreover, we assert that LO serves as an ‘organizational glue’ that binds EO and MO together by enabling firms to effectively process information, iterate upon their mistakes, and develop successful innovations (Sinkula et al., 1997). The work of Kraft and Busch (2016) supports this proposed framework using a competing hypothesis design research, observing EO to be associated with explorative innovation, MO with exploitative innovation, and LO with both forms of innovation. Thus, a firm can scan markets and technologies, and spot opportunitites for refining business models through its MO, explore ambitious possibilities for new entry and renewal through its EO, and continuously refresh organizational routines and perspectives using its LO.

To produce innovative new entries, firms increase EO (Lumpkin & Dea, 1996), however, it is the complementary capabilities of MO, and LO that enable EO to maximize the promise of new product/service offerings. Absent MO, firms’ EO efforts are less targeted, or firmly rooted in market demands. That is, technological myopia, or the building of products with entrepreneurs’ ideas, rather than customers’ needs, in mind is more likely when firms lack MO. Moreover, absent LO, entrepreneurial efforts will fail to achieve the iteration, or development cycles, necessary for new products to attain an effective fit with market demands. When EO is pursued, variance in firm performance increases (Wiklund & Shepherd, 2011). Maximizing firm sales growth critically depends upon firms’ ability to learn from their failed innovative efforts to solve customer problems and work toward achieving product-market fit and develop more scalable business models (Blank, 2013).

Ongoing discussion on the complementary effects of strategic orientations reinforces the need to provide a richer understanding of the co-variations manifest between orientations, and their shared associations with business performance. To this end, we examine the complementary effect of MO, EO and LO on performance, and hypothesize that:

Hypothesis 2. When the variance within the relationships between (a) MO, (b) EO and (c) LO and firm sales growth is decomposed and compared, the shared variance at the intersection of all three strategic orientations matters more than their individual effects.

2.3. Proactive learning culture as a strategic orientation synthesis

The complementary nature of EO, MO, and LO has been widely discussed in the literature from a bi-variate standpoint (e.g., Atuahene-Gima & Re, 2001; Boso, Cadogan, & Story, 2013; Boso, Story, & Cadogan, 2013) as well as on the simultaneous consideration of multiple orientations (Hakala, 2011). Proponents of the complementarity perspective explain how value emerges from a combination of strategic orientations as opposed to finding the right sequences or alternatives of orientations (see Hakala, 2011). Past research has typically viewed the combination of EO, MO, and LO as a higher-order construct, and given this concept various labels such as ‘strategic orientation’ (e.g., Zhou, Yin, & Tse, 2003), ‘positional advantage’ (e.g., Lonial & Carter, 2015), or ‘culture of competitiveness’ (Hilti et al., 2007). More recently, Gnizy et al. (2014) refer to the intersection of these strategic orientations as a ‘proactive learning culture’, which drives foreign market launch success. In effect, pairing LO with MO and EO will lead to enhanced learning about new potential product-market opportunities. Moreover, building upon Hult and Ketchen (2001), Lonial and Carter (2015) view the intersection of these strategic orientations as creating a ‘positional advantage’ for the firm within the marketplace. That is, exhibiting EO and MO, combined with LO is likely to help the firm deploy unique and difficult to imitate skills and resources while working toward firm performance and growth. In this vein, Deutscher et al. (2016) observes partial support for the notion that highest firm performance is achieved when EO, MO, and LO are all at high levels.

Building upon prior research and following Gnizy et al. (2014), we examine EO, MO, and LO as essential indicators of a firm’s strategic priorities and how they may reflect a higher order construct – proactive learning culture (PLC). We support the notion that PLC be viewed as a dynamic capability “through which SMEs can configure resources and capabilities” (Gnizy et al., 2014, p. 482), which may increase firm performance. To exhibit a proactive learning culture, firms must understand/monitor customers, competitors, develop and proactively introduce innovations, and be able to question assumptions and learn (that is, develop open-mindedness, a commitment to learning, and shared vision). PLC melds building and launching new product-market offerings (EO), with understanding customer needs and competitor gaps (MO), and a commitment to learning and open-mindedness (LO). Building upon past research conceptualizing PLC, we hypothesize and test:

Hypothesis 3a. As fundamental organizational strategic orientations, entrepreneurial, market, and learning orientations represent critical components and indicators that contribute to a higher-order, proactive learning culture within organizations.

Hypothesis 3b. Proactive learning culture positively relates to firm sales growth.

3. Method

3.1. Sampling

To test our hypotheses, survey data were collected in Finland and Russia during 2013–2014. Strong historical, geographical, political, and economic ties connect Finland and Russia with each other. To illustrate, the two countries share a common border and a long history of relationships as well as strong trading partnership. Companies, constituting the population for the research, were privately owned Finnish and Russian firms, operating in different industries. To reduce potential cross-country construct invariance, the method of translation and back translation of the questionnaire was used (Brindley, 1970), and pilot testing was undertaken.

The population of Finnish and Russian firms meeting the selection criteria was retrieved from the Amadeus database and SPARK-Interfax database respectively. From these populations, a sample of 8000 Finnish and 12,000 Russian companies were randomly selected, and a standardized questionnaire was distributed to the key respondents of the whole sample using the online survey and analysis tool Webropol 2.0. Data were collected separately in two countries. We distributed the standardized questionnaire to companies’ founders and/or CEOs, as

1 Amadeus (Bureau van Dijk) is a database of financial and business information on around 21 million European companies. It contains financial statement data as well as basic company information, including sectoral activities, corporate structures, market research, and business and company-related news.

2 The SPARK-Interfax (System of Professional Analysis of Markets and Companies) database covers 12 million Russian, Ukrainian, and Kazakh companies, accumulates information from all possible official sources and enables comparative analysis of data on companies, markets, industries and regions as well as ranking by > 1000 business and financial indicators.
To address concerns about potential non-response bias, the samples were split in two groups based on the dates the completed surveys were received. The early-wave groups consisted of 58 and 52 respondents in Finland and Russia respectively, while the rest of the samples represented late-wave groups. In both samples, t-tests yielded no significant differences between the two groups for all variables of interest. Further, the Amadeus database allowed comparing nonresponding Finnish firms (n = 7983) with those who responded (n = 117). Using t-tests for firm size and chi-square test for industry, no significant differences between the group of respondents and non-respondents were found, demonstrating that nonresponse bias does not represent a significant problem in the study. After data cleaning, the final pooled dataset of Finnish and Russian companies was 221 firms.

Firms in our sample are quite evenly distributed regarding the country of origin: 52% Finnish and 48% Russian. By size, the majority of firms are small with an average of 53 employees, ranging between 1 and 500 employees. The firms have been operating between 2 and 108 years since their foundation, and, on average, for 14.6 years. The majority of firms operate in a service sector (46.15%), and a number of these respondents are most knowledgeable about firm strategy (Calantone et al., 2002; Deutche et al., 2016). Since the number of emails that reached the respondents may have been substantially reduced due to potential technical issues, e-mail protection tools or human factors (Franke, Von Hippel, & Schreier, 2006; Tse, 1998), emails that reached the respondents may have been substantially re-

### Table 1

Constructs, measurement items and reliability and validity tests

<table>
<thead>
<tr>
<th>Variable</th>
<th>Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market orientation (Vonk &amp; Benner, 1994)</td>
<td></td>
</tr>
<tr>
<td>Customer orientation: CR = 0.74; AVE = 0.69.</td>
<td></td>
</tr>
<tr>
<td>1. We constantly monitor our level of commitment and orientation to serving customers’ needs. 0.70</td>
<td></td>
</tr>
<tr>
<td>2. Our business strategies are driven by our beliefs about how we can create greater value for customers. 0.84</td>
<td></td>
</tr>
<tr>
<td>3. Our strategy for competitive advantage is based on our understanding of customer needs. 0.53</td>
<td></td>
</tr>
<tr>
<td>4. Our business objectives are driven primarily by customer satisfaction. 0.76</td>
<td></td>
</tr>
<tr>
<td>5. We give close attention to after-sales service.</td>
<td></td>
</tr>
<tr>
<td>6. We measure customer satisfaction systematically and frequently.*</td>
<td></td>
</tr>
<tr>
<td>Competitor orientation: CR = 0.75; AVE = 0.56.</td>
<td></td>
</tr>
<tr>
<td>7. The top management team regularly discusses competitive strengths and strategies. 0.76</td>
<td></td>
</tr>
<tr>
<td>8. We target customers and customers groups where we have, or can develop, a competitive advantage.*</td>
<td></td>
</tr>
<tr>
<td>9. Our salespeople regularly share information within our business concerning competitor strategies 0.66</td>
<td></td>
</tr>
<tr>
<td>10. We rapidly respond to competitive actions that threaten us.</td>
<td></td>
</tr>
<tr>
<td>Inter-functional coordination: CR = 0.81; AVE = 0.54.</td>
<td></td>
</tr>
<tr>
<td>11. Our top managers from every function regularly visit our current and prospective customers.*</td>
<td></td>
</tr>
<tr>
<td>12. We communicate information about our successful and unsuccessful customer experience across all business functions. 0.47</td>
<td></td>
</tr>
<tr>
<td>13. All of our business functions (e.g. marketing/sales, manufacturing, R&amp;D, finance/accounting, etc.) are integrated in serving the needs of our target markets. 0.78</td>
<td></td>
</tr>
<tr>
<td>14. All of our managers understand how everyone in our company can contribute to creating customer value. 0.72</td>
<td></td>
</tr>
<tr>
<td>15. All of our business functions share resources with other business units (information, etc.). 0.76</td>
<td></td>
</tr>
<tr>
<td>Entrepreneurial orientation (Costa &amp; Silva, 1989)</td>
<td></td>
</tr>
<tr>
<td>Innovation: CR = 0.82; AVE = 0.60.</td>
<td></td>
</tr>
<tr>
<td>1. In general, the top managers of my firm favor a strong emphasis on R&amp;D, technological leadership, and innovation. 0.61</td>
<td></td>
</tr>
<tr>
<td>2. My firm has marked very many new lines of products or services in the past five years. 0.86</td>
<td></td>
</tr>
<tr>
<td>3. Changes in product or service lines have usually been quite dramatic. 0.85</td>
<td></td>
</tr>
<tr>
<td>Proactiveness: CR = 0.82; AVE = 0.70.</td>
<td></td>
</tr>
<tr>
<td>4. In dealing with its competitors, my firm typically initiates actions which competitors then respond to. 0.74</td>
<td></td>
</tr>
<tr>
<td>5. In dealing with its competitors, my firm is very often the first business to introduce new products/services, administrative techniques, operating technologies, etc. 0.92</td>
<td></td>
</tr>
<tr>
<td>6. In dealing with its competitors, my firm typically adopts a very competitive, ‘nails-the-competitors’ posture.*</td>
<td></td>
</tr>
<tr>
<td>Risk-taking: CR = 0.81; AVE = 0.58.</td>
<td></td>
</tr>
<tr>
<td>7. In general, the top managers of my firm have a strong profitability for high-risk projects (with chances of very high return). 0.78</td>
<td></td>
</tr>
<tr>
<td>8. In general, the top managers of my firm believe that creating the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm’s objectives. 0.80</td>
<td></td>
</tr>
<tr>
<td>9. When confronted with decision-making situations involving uncertainty, my firm typically adopts a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities. 0.70</td>
<td></td>
</tr>
<tr>
<td>Learning orientation (Sinkula et al., 1997)</td>
<td></td>
</tr>
<tr>
<td>Commitment to learning: CR = 0.81; AVE = 0.71.</td>
<td></td>
</tr>
<tr>
<td>1. Managers basically agree that our organization’s ability to learn is the key to our competitive advantage. 0.80</td>
<td></td>
</tr>
<tr>
<td>2. The basic values of our organization include learning as a key to improvement. 0.91</td>
<td></td>
</tr>
<tr>
<td>3. The sense around here is that employee learning is an investment, not an expense. 0.85</td>
<td></td>
</tr>
<tr>
<td>4. Learning in my organization is seen as a key commodity necessary to guarantee organizational survival. 0.82</td>
<td></td>
</tr>
<tr>
<td>5. There is a commonality of purpose in my organization. 0.87</td>
<td></td>
</tr>
<tr>
<td>6. There is total agreement on our organizational vision across all levels, functions and divisions. 0.80</td>
<td></td>
</tr>
<tr>
<td>7. All employees are committed to the goals of this organization. 0.82</td>
<td></td>
</tr>
<tr>
<td>8. Employees view themselves as partners in charting the direction of the organization. 0.80</td>
<td></td>
</tr>
<tr>
<td>Open-mindedness: CR = 0.89; AVE = 0.68.</td>
<td></td>
</tr>
<tr>
<td>9. We are not afraid to reflect critically on the shared assumptions we have made about our customers. 0.75</td>
<td></td>
</tr>
<tr>
<td>10. People in this enterprise believe that the very way they perceive the marketplace must be continually questioned. 0.71</td>
<td></td>
</tr>
<tr>
<td>11. We are always collectively question our own bases about the way we interpret customer information. (reverse scored)</td>
<td></td>
</tr>
</tbody>
</table>

CR = composite reliability; AVE = average variance extracted.

* Item omitted as a result of CFA.
firms operating in production and occupied with informational and intellectual activities are distributed equally (26.24% and 27.60% accordingly).

3.2 Measures

3.2.1 Dependent variable

We adopt a financial indicator for sales growth rate which has been widely used in the management and marketing literatures to measure firm performance (Diamantopoulos, Davidson, & Gartner, 2003). Sales growth was operationalized as the percentage change in firms’ sales from 2010 to 2012. This measure was included in the questionnaire as a proxy of the latent construct. Additionally, the complicated specifications of the models, giving preference to objective data where possible.

3.2.2 Independent variables

In measuring firm’s strategic orientations, the current study relies on the established scales. All the questions in the survey were related to firms’ activities in 2012. Following Narver and Slater (1990), we operationalized market orientation as a three-dimensional construct, comprising customer orientation, competitor orientation and inter-functional coordination. A fifteen-item scale adapted from Narver and Slater (1990) was used to measure firm-level MO. The items were measured on a five-point Likert scale and included six items for assessment of customer orientation, four items for measurement of competitor orientation and five items for assessment of inter-functional coordination. The operationalization of entrepreneurial orientation was based on the work of Covin and Slevin (1989) and captured the dimensions of innovativeness, proactiveness and risk-taking (Covin & Lumpkin, 2001). The nine-item seven-point scale, which comprised of three items for each dimension, was employed to measure firm-level EO.

Learning orientation was operationalized with three dimensions of commitment to learning, shared vision and open-mindedness, following Sinkula et al. (1997). From the existing literature, the eleven-items scale was used to measure firm-level LO. The scale comprises four items for commitment to learning and shared vision, and three items for open-mindedness, measured on a seven-point Likert scale. Table 1 describes the specific items used for construct measurement and their respective factor loadings.

Control variables. The level of strategic orientations and firm sales growth outcomes might also be contingent on firm age, size, and type of industry, which were used as control variables in the study. Firm age was estimated by the number of years since the firm was started. Firm size was operationalized as the total number of employees in 2012. In order to respond to the assumption of distribution normality, a natural logarithm transformation of these variables was taken. To control for industry, three dummy variables were created, reflecting companies’ activities in one of the following sectors of economy: production, services, or intellectual and informational activities.

To address concerns about common method bias, Harman’s single-factor test was applied. Principal component factor analysis with all variables yielded six factors with eigenvalues >1, with the variance explained by the first factor accounting for > 50% of the total variance, indicating that common method variance is not a substantive concern in this study. Additionally, the complicated specifications of the models, which includes unique and shared effects of the orientations, are unlikely to be perceived by respondents (Chang, van Witteloostuijn, & Eden, 2010).

4. Data analysis and results

4.1 Reliability and validity of the constructs

We conducted unpoled data analysis at the country level to ensure that the measures work satisfactorily in each country, and then performed pooled data analysis with "decultured" (standardized in each country’s sample) data to determine the common relationships across countries. This two-step procedure provides a rigorous test of the research model in a multi-country setting (Engelen, Gupta, Stronger, & Brettel, 2015).

For each country separately, confirmatory factor analysis (CFA) using maximum likelihood estimation was conducted on each of the latent constructs of MO, EO, and LO to examine the constructs’ uni-dimensionality, reliability and validity. Because the sample size for each country is not sufficient enough to assess complex models, we analyzed the scales separately in order to mitigate risk of violating minimum sample size to parameter ratios. In the first measurement model, we examined the MO construct and its dimensions of customer orientation, competitor orientation and inter-functional coordination. The second measurement model contained the three dimensions of EO: innovativeness, proactiveness and risk-taking. In the third model, we assessed LO dimensions of commitment to learning, shared vision and open-mindedness. CFA helps to identify problematic items in the constructs, and, based on the factor loadings, fit statistics, and modification indices, several items which were not tapping a single underlying construct were eliminated (Gerbing & Anderson, 1988). Model re-specification helps adjust the constructs to the data, improving overall fit. Given the sample size, all measurement models exhibited adequate fit to the data (Finland/Russia: MO: χ²/df = 2.02/1.83, GFI = 0.90/0.91, CFI = 0.92/0.92, RMSEA = 0.09/0.09; EO: χ²/df = 0.79/1.70, GFI = 0.97/0.93, CFI = 1.00/0.95, RMSEA = 0.00/0.08; LO: χ²/df = 1.81/1.01, GFI = 0.92/0.95, CFI = 0.97/1.00, RMSEA = 0.08/0.01) and all items loaded on singular underlying latent variables respectively, demonstrating unidimensional measurements and convergent validity.

We checked latent variables for measurement invariance using multi-group CFA analysis to indicate that the same constructs were measured in both countries, and the measure was interpreted in a conceptually similar manner by the respondents (Vandenberg & Lance, 2000). The results have confirmed configural invariance between two country groups (χ²/df = 1.72, GFI = 0.93; CFI = 0.95; RMSEA = 0.06), showing that respondents conceptualize the constructs in the same way, and the data collected in each country represent the same number of factors with the same items associated with each factor. Further, a chi-square difference test between the baseline model and the model with all factor loadings constrained to be the same across groups established metric invariance, indicating that the country groups are equivalent with regard to factor structure, that is, the relationships between specific scale items and the construct are the same across the groups. Additionally, to complement the chi-square difference test, CFI difference between the two models was calculated following Cheung and Rensvold (2002). An estimated decrease of 0.003 in CFI does not exceed the proposed threshold value of 0.01, further confirming the measurement invariance and suggesting that combining data from the two countries is acceptable.

As the current research does not focus on comparative analysis and establishing differences between the countries, but rather on establishing strong effects that are generalizable across different country contexts, we removed national bias by standardizing data separately in each country before pooling it and performing the analyses. Data standardization helps ‘deculture’ the data (Cong, Kawakami, & Stringfellow, 2010), so that the true correlation between the variables is
not affected by country-specific characteristics. It also helps to increase confidence in the robustness of hypothesized effects and determine whether there is a common core of relationships across the countries (Eigelen et al., 2015, Song et al., 2010). In the following analyses, we accessed the robustness and cross-national applicability of the measurement models, performed a commonality analysis (Lomberg et al., 2017; Mood, 1971; Seibold & McPhee, 1979). Commonality analysis compares variance explained by the models with different subsets of independent variables and is particularly relevant when those are substantially correlated. This characteristic makes it appropriate for analyzing strategic orientations. Commonality analysis allows to uncover the structure of explanatory power of the PLC dimensions’ for sales growth by assessing the parts of variance attributed to unique effects (variations only in EO, MO, or LO), bilaterally shared effects (covariations between any pair of strategic orientations), and commonly shared effects (covariation between all strategic orientations). The sum of unique, bilaterally and commonly shared effects of EO, MO, and LO represents their total effect on firm sales growth.  

### Table 3: Descriptive statistics and correlations.

<table>
<thead>
<tr>
<th>N</th>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sales growth</td>
<td>29.66</td>
<td>54.96</td>
<td>-0.27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Firm age</td>
<td>2.39</td>
<td>0.75</td>
<td>-0.27</td>
<td>0.42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Firm size</td>
<td>2.65</td>
<td>1.59</td>
<td>-0.15</td>
<td>0.41</td>
<td>0.26</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Productivity</td>
<td>2.46</td>
<td>0.49</td>
<td>0.08</td>
<td>-0.07</td>
<td>-0.16</td>
<td>-0.25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Services</td>
<td>4.07</td>
<td>1.26</td>
<td>0.14</td>
<td>0.05</td>
<td>0.12</td>
<td>0.08</td>
<td>0.12</td>
<td>0.03</td>
<td>0.43</td>
</tr>
<tr>
<td></td>
<td>Entrepreneurial orientation</td>
<td>3.82</td>
<td>0.59</td>
<td>0.16</td>
<td>-0.09</td>
<td>-0.05</td>
<td>-0.05</td>
<td>0.03</td>
<td>0.44</td>
<td>0.59</td>
</tr>
<tr>
<td></td>
<td>Learning orientation</td>
<td>6.97</td>
<td>1.10</td>
<td>0.17</td>
<td>-0.17</td>
<td>-0.21</td>
<td>-0.04</td>
<td>-0.03</td>
<td>0.30</td>
<td>0.59</td>
</tr>
</tbody>
</table>

Notes: significant at α = 0.05. M = mean, SD = standard deviation.

**Commonality analysis**

To test Hypotheses 1 and 2, commonality analysis was performed to decompose the total variance in firm sales growth explained by three strategic orientations (Lomberg et al., 2017; Mood, 1971; Seibold & McPhee, 1979). Commonality analysis compares variance explained by the models with different subsets of independent variables and is particularly relevant when those are substantially correlated. This characteristic makes it appropriate for analyzing strategic orientations. Commonality analysis allows to uncover the structure of explanatory power of the PLC dimensions’ for sales growth by assessing the parts of variance attributed to unique effects (variations only in EO, MO, or LO), bilaterally shared effects (covariations between any pair of strategic orientations), and commonly shared effects (covariation between all strategic orientations). The sum of unique, bilaterally and commonly shared effects of EO, MO, and LO represents their total effect on firm sales growth. 

### Table 2: Measurement models and fit indices.

<table>
<thead>
<tr>
<th>CFA model</th>
<th>χ²/df</th>
<th>p-Value</th>
<th>GFI</th>
<th>CFI</th>
<th>SRMR</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement model 1</td>
<td>2.87</td>
<td>0.00</td>
<td>0.97</td>
<td>0.99</td>
<td>0.05</td>
<td>0.06</td>
</tr>
<tr>
<td>Measurement model 2</td>
<td>2.36</td>
<td>0.05</td>
<td>0.99</td>
<td>0.99</td>
<td>0.04</td>
<td>0.06</td>
</tr>
<tr>
<td>Measurement model 3</td>
<td>1.87</td>
<td>0.01</td>
<td>0.98</td>
<td>0.99</td>
<td>0.04</td>
<td>0.06</td>
</tr>
<tr>
<td>Full measurement model</td>
<td>1.78</td>
<td>0.01</td>
<td>0.96</td>
<td>0.97</td>
<td>0.05</td>
<td>0.06</td>
</tr>
</tbody>
</table>


Full measurement model: all items retained in model 1 through to model 3 were modeled simultaneously. χ²/df = chi square/degree of freedom ratio; GFI = goodness of fit index; CFI = comparative fit index; SRMR = standardized root mean residual; RMSEA = root mean square error of approximation. 

Chi-square values for MO, LO and full measurement models were significant (p < 0.05), and all other fit indices were within the acceptable cut-off range. Specifically, indices for the full measurement model were satisfactory (GFI = 0.96, CFI = 0.97, SRMR = 0.05 and RMSEA = 0.06, ns.), and, therefore, demonstrate the applicability of the constructs’ structure to the data (Anderson & Gerbing, 1992; Byrne, 2009). Again, all items loaded on singular underlying constructs respectively, implying that there were no departures from uni-dimensionality. Table 1 contains the final list of items, standardized factor loadings and the results of reliability and validity tests. The positive and significant loadings confirm convergent validity of the measures. Results also show acceptable levels of average variance extracted (AVE) and composite reliability (CR) of the variables.

Finally, the resulting values of multiple-item variables were calculated as an average score on all the items. Table 3 contains descriptive statistics and correlations between the studied constructs. The largest correlation coefficient is 0.59 (between MO and LO). The test for multicollinearity in the model has shown that all variance inflation factors (VIFs) are below 3 with an average of 1.46 (VIF = 1.77 for MO; 1.65 for LO; 1.31 for EO), which assuages possible concerns of multi-collinearity and implies that the model with all variables included can be estimated (O’Brien, 2007).
By applying the commonality analysis to strategic orientations, we assess the extent to which the contributions of EO, MO and LO are unique and shared between any of the pairs of strategic orientations and the combination of all three orientations, while controlling for firm age, size and industry effects. The results of variance decomposition are presented in Table 4 and graphically illustrated in Fig. 1.

The total effect of all strategic orientations after accounting for the effects of control variables is statistically significant (Line 8: 0.037, \( p < 0.05 \)). This result indicates that the total effect of EO, MO, and LO explains a significant amount of performance variation as an increment in explained variance in sales growth. Among the individual effects of strategic orientations, only EO shows a significant unique effect (Line 1: 0.016, \( p < 0.10 \)) on firm sales growth, which accounts for 42% of the explained variance. The unique effects of MO and LO (Lines 2 and 3) do not explain sales growth in a statistically significant way, indicating that most of their explanatory power is shared with EO. Therefore, when comparing the effects of three strategic orientations on sales growth, only entrepreneurial, as opposed to market or learning orientation, explains the dominant amount of variance, providing support for Hypothesis 1.

The significance levels for shared effects are based on largest bias-corrected and accelerated bootstrapped confidence interval not including zero (Kumush et al., 2017). The largest part of the shared effects is a statistically significant commonly shared effect between EO, MO, and LO (Line 7: 0.010, \( p < 0.05 \)), which explains 26% of variance in sales growth. Interestingly, the unique EO effect is larger (Line 1: 0.016, \( p < 0.10 \)) than the commonly shared effect attributed to covariation of all three strategic orientations and smaller than the sum of their shared effects (Lines 4–7: 0.005 + 0.001 + 0.003 + 0.010 = 0.019). The latter explain about half of the total effect (Line 8: 0.037) from the three strategic orientations and emphasize the importance of synthesizing EO, MO, and LO. Thus, the results do not support Hypothesis 2 that the shared variance at the intersection of all three strategic orientations matters more compared to their individual effects.

4.3. Structural equation modeling

To test Hypotheses 3a and 3b, we utilized structural equation modeling and estimated the effect of PLC as a three-dimensional higher-order construct on firm sales growth. First, we estimated the individual effects of MO, EO, and LO on sales growth. The model has demonstrated a satisfactory fit to the data (\( \chi^2/df = 2.27, p = 0.01 \); GFI = 0.97; CFI = 0.95; SRMR = 0.06; RMSEA = 0.08, \( p = 0.11 \)). Similar to results of the commonality analysis, EO is significantly and positively related to firm sales growth (\( b = 0.14, p < 0.05 \)), while MO and LO are not directly associated with superior sales growth, confirming that in our sample it is driven primarily by EO rather than MO or LO.

In the complementarity model, MO, EO, and LO are conceptualized and tested as indicators of a higher-order PLC construct. A structural model allows the estimation of a firm-level common factor underlying learning, market, and entrepreneurship behaviors (George, 2011). In this case, PLC is represented by the extent to which the sub-dimensions covary, such that only a change in all three dimensions would represent a change in PLC. We therefore can (a) assess the validity of the PLC construct and (b) estimate the amount of variance in performance resulting from a change in the underlying first-order constructs. SEM results are presented in Table 5 and graphically illustrated in Fig. 2.

The model goodness-of-fit indices were within the acceptable cut-off ranges (\( \chi^2/df = 2.13, p = 0.01 \); GFI = 0.97; CFI = 0.95; SRMR = 0.06; RMSEA = 0.07, \( p = 0.14 \)). The results shown that all three strategic orientations significantly load on the higher-order construct (PLC →

![Image](https://example.com/image.png)

Fig. 1. Graphical illustration of the commonality analysis results. Notes: *** \( p < 0.001 \); ** \( p < 0.01 \).

Note that in SEM analysis only the commonly shared variance is attributed to the multidimensional construct, whereas the other types of variance (bilateral shared and unique) are considered as part of the error variance (Law & Wong, 1999).
Firm sales growth
Market orientation
Entrepreneurial orientation
Learning orientation

Hypothesis 3b. This result demonstrates that firms with multiple strategic orientations exhibit higher levels of firm sales growth.

4.4. Post-hoc analysis

We conducted several analyses to examine the robustness of our findings. First, we included ‘country’ as a control variable and reran the models. The results indicate that the sign and significance of predictor variables remain unchanged meaning that performance in our sample is not driven by the country effects.

Second, we applied a different dependent variable – profit growth, measured as the percentage change in firm profits from 2010 to 2012. As expected, profit and sales growth were highly correlated (0.73, p < 0.01) and therefore included in our calculations separately. Specifically, we used the same models to perform commonality analysis and SEM for profit growth. When decomposing variance for profit growth, most of it is explained by the unique effect of EO (0.023, p < 0.001, 27%) and commonly shared effect of all strategic orientations (0.023, p < 0.001, 27%). Besides this, the results have also shown that unique LO (0.017, p < 0.10; 20%) and bilaterally shared EO & LO (0.007, p < 0.05, 8%) effects contribute to the variance in profit growth, but to a smaller extent. More than half of the variance is attributed to shared effects, confirming the relevance of synthesizing EO, MO, and LO. The SEM model of complementary effects of strategic orientations confirmed the positive effect of firm’s PLC (PLC→MO: b = 0.59, p < 0.001, PLC→EO: b = 0.64, p < 0.001, PLC→LO: b = 0.49, p < 0.001) on profit growth (b = 0.37, p < 0.001), providing support for combining EO, MO, and LO into a collective catchall that captures firm proactive learning culture.

Third, we compared the data fit of complementarity model with eight alternative SEM models: individual effects models with and without covariances between EO, MO and LO, and six additional reduced models, in which each of the three orientations and all pairs of the orientations were assessed as indicators of PLC (Table 6).

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Table 5

<table>
<thead>
<tr>
<th>Hypothesized effects</th>
<th>Regression weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLC→MO</td>
<td>0.18</td>
</tr>
<tr>
<td>PLC→EO</td>
<td>0.75</td>
</tr>
<tr>
<td>PLC→LO</td>
<td>0.40</td>
</tr>
<tr>
<td>PLC→sales growth</td>
<td>0.23</td>
</tr>
<tr>
<td>Control effects</td>
<td></td>
</tr>
<tr>
<td>Firm age→sales growth</td>
<td>-0.26</td>
</tr>
<tr>
<td>Firm size→sales growth</td>
<td>-0.07</td>
</tr>
<tr>
<td>Proximity→sales growth</td>
<td>0.11</td>
</tr>
<tr>
<td>Services→sales growth</td>
<td>0.12</td>
</tr>
</tbody>
</table>

Table 6

<table>
<thead>
<tr>
<th>Structural models</th>
<th>χ²/df</th>
<th>p-Value</th>
<th>GFI</th>
<th>CFI</th>
<th>SRMR</th>
<th>RMSEA</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual effects (IE) model</td>
<td>2.27</td>
<td>0.01</td>
<td>0.97</td>
<td>0.95</td>
<td>0.06</td>
<td>0.08</td>
<td>0.11</td>
</tr>
<tr>
<td>Reduced model 1: IE model without covariances</td>
<td>10.71</td>
<td>0.00</td>
<td>0.85</td>
<td>0.55</td>
<td>0.15</td>
<td>0.21</td>
<td>0.00</td>
</tr>
<tr>
<td>Reduced model 2: EO</td>
<td>1.49</td>
<td>0.19</td>
<td>0.99</td>
<td>0.98</td>
<td>0.05</td>
<td>0.05</td>
<td>0.45</td>
</tr>
<tr>
<td>Reduced model 3: MO</td>
<td>6.03</td>
<td>0.67</td>
<td>1.00</td>
<td>1.00</td>
<td>0.01</td>
<td>0.09</td>
<td>0.36</td>
</tr>
<tr>
<td>Reduced model 4: LO</td>
<td>2.76</td>
<td>0.02</td>
<td>0.98</td>
<td>0.94</td>
<td>0.06</td>
<td>0.09</td>
<td>0.10</td>
</tr>
<tr>
<td>Reduced model 5: EO, MO</td>
<td>1.59</td>
<td>0.11</td>
<td>0.98</td>
<td>0.97</td>
<td>0.05</td>
<td>0.05</td>
<td>0.42</td>
</tr>
<tr>
<td>Reduced model 6: EO, LO</td>
<td>2.86</td>
<td>0.00</td>
<td>0.97</td>
<td>0.91</td>
<td>0.07</td>
<td>0.09</td>
<td>0.05</td>
</tr>
<tr>
<td>Reduced model 7: MO, LO</td>
<td>1.92</td>
<td>0.04</td>
<td>0.98</td>
<td>0.97</td>
<td>0.06</td>
<td>0.07</td>
<td>0.26</td>
</tr>
<tr>
<td>Complementarity model: EO, MO, LO</td>
<td>2.13</td>
<td>0.01</td>
<td>0.97</td>
<td>0.95</td>
<td>0.06</td>
<td>0.07</td>
<td>0.14</td>
</tr>
</tbody>
</table>

MO: b = 0.58; p < 0.001; PLC→EO: b = 0.75; p < 0.001; PLC→LO: b = 0.40; p < 0.001, providing support for Hypothesis 3a that EO, MO, and LO represent fundamental components of firms’ PLC. We tested for the presence of the second-order factor complementarity model by calculating a target coefficient (T) (March & Heocvar, 1985), which is the ratio of the chi-square of the first-order (individual effects) factor model to the chi-square of the second-order factor model. The T target coefficient equaled 0.99 justifying the existence of the second-order factor model. Further, the effect of PLC on firm sales growth was found to be positive and significant (b = 0.23; p < 0.01), supporting Hypothesis 3b. This result demonstrates that firms with multiple
5. Discussion and implications

Several notable strategic orientations have taken center stage within recent research exploring management and marketing (Hakala, 2011). This study offers a systematic decomposition and comparison of the variance attributed to three fundamental strategic orientations, EO, MO, and LO, on a key indicator of firm performance, organizations’ sales growth. Moreover, this study advances our understanding regarding the shared variance of EO, MO, and LO as capturing a firm’s proactive learning culture. As such, this study has several notable implications.

First, using the technique of commonality analysis (Lomberg et al., 2017), our investigation of the individual unique effects of the three fundamental strategic orientations reveals that firm performance, measured as sales growth, is overwhelmingly driven by EO within our cross-national random sample of 221 firms from Finland and Russia. Firms with high levels of EO pursue bolder, more radical innovation, accept greater risk and proactively operate in the marketplace (Covin & Slevin, 1989; Covin & Lumpkin, 2001). Therefore, our results suggest that it is EO, more so than MO or LO, that is responsible for gains in firm sales growth, a finding which runs contrary to studies suggesting stronger relationships between MO and sales growth (i.e., Döttcher et al., 2016). Thus, at least for firms in our sample, channeling resources toward EO, and the bolder, more exploratory and radical innovations bear the highest potential for sales growth.

We further observe that while EO is positively associated with firm sales growth, MO– and LO–sales growth relationships did not reach significance. In our sample, MO’s performance effect is not statistically significant, suggesting that it may have become a cost of competing rather than a source of advantage (Kumar et al., 2011). Concerning LO, the existing literature contains evidence that its effect on firm performance may be weak and context dependent (Laukkanen et al., 2013), the existing literature contains evidence that its effect on firm performance may be weak and context dependent (Laukkanen et al., 2013).

Concerning LO, the existing literature contains evidence that its effect on firm performance may be weak and context dependent (Laukkanen et al., 2013). Nonetheless, divergence from past findings suggests the importance of future research into whether different elements of a firm’s PLC that describes firms’ competitive efforts. Thus, examining EO without MO or LO presents a limited, albeit focused perspective that is principally concerned with exploration, and firms’ bold, pioneering innovation efforts, without taking into account how adept the firm is at learning or marketing.

A practical implication of this research is that managers prioritizing achieving sales growth should adopt an innovative, EO-related strategic posture, which, in our sample, explains >40% of the variance in sales growth. Nonetheless, divergence from past findings suggests the importance of future research into whether different elements of a firm’s proactive learning culture matter more in specific industries/environments. The answer to the question, which orientation matters the most, is arguably it depends, though the combination of EO, MO, and LO is observed to play an important role in firms’ growth.

6. Limitations and additional areas for further research

As with any study, this research has certain limitations and offers areas for future research. First, while data collection at a single point in time is a common practice within research on firms’ strategic orientations, it does limit claims of causality. Further, we used a growth-based performance measure as a dependent variable, and so the efficacious elements of a firm’s PLC may change based upon the nature of the dependent variable. We encourage further examination of other measures of firm performance and when data permitting, use of a longitudinal design to establish the effects from strategic orientation in the long-run and assess possible evolutionary changes in the relationships between the three orientations. For instance, perhaps if survival (rather than the unique, or bi-laterally sharedeffectsinisolation.Althoughthe
Hypothesis 2, that complementary – commonly shared effects of EO, MO, and LO – explain significantly more variance in firm sales growth
and LO primarily drives non-financial rather than financial perfor-
formance effects
and LO primarily drives non-financial rather than financial perfor-
mance may be weak and context dependent (Laukkanen et al., 2013),
the existing literature contains evidence that its effect on firm perfor-
mance may be weak and context dependent (Laukkanen et al., 2013).
Thus, focusing on the effect of EO, MO, and LO as essential indi-
than growth) is examined, we might observe a stronger shared-effect of EO, MO, and LO. That is, while EO drives firm growth, there is potentially a survival bias involved, so that EO is greater, among surviving firms, at explaining firm growth. However, when survival is considered, MO and LO may play a larger role in helping firms survive due to more thoroughly considered market alignment. This study is also based on a sample collected from Finland and Russia, which, despite their geographical, historical, economic and political ties, are different nations. Although we performed a ‘de-cultured’ pooled data analysis (Engelen et al., 2015), which helped to eliminate national bias, replication studies using different samples will further improve the external validity of the findings. Future research exploring PLC may verify the results obtained in this study in other countries and more fully investigate the link between these strategic orientations and performance in different settings. Our finding about EO’s greater potency compared to the other two strategic orientations may also be a function of the social and institutional context in which our research is conducted. It is possible that specific aspects of Finnish and Russian society may align to make it more conducive for firms to benefit from their EO as compared to MO and LO. The extent to which our findings generalize to other countries is an empirical issue, and future research would do well to examine the relative efficacy of the three strategic orientations in other national, institutional, or socio-cultural contexts. In terms of future model building, our research suggests that it is beneficial to examine configurations of these strategic orientations to determine which aspects of proactive learning culture are most relevant and pronounced within various industry/environmental contexts. As most firms in our sample are small, relatively young and dynamic, future research should explore the robustness of our findings in older, larger, and less dynamic environments. Further, when investigating aspects of PLC such as EO, MO, or LO in isolation, it may be helpful to compare and control for the other elements of PLC to increase confidence in the strength of study findings. Further, it may be wise to reconsider past models examining mediating effects among EO, MO, and LO and firm performance as potentially reciprocal. That is, for instance, MO → LO → firm performance and LO → MO → firm performance may both be significant as these central aspects and elements of a broader PLC are highly correlated. LO likely drives MO, and vice versa. While there have been numerous calls for mediation research (Wiles, 2013), such studies are likely to be most beneficial when examining factors outside of strategic orientations themselves as mediating influences on firm performance. Future research exploring multiple strategic orientations may also examine the role of different aspects of the external environment, including environmental dynamism, heterogeneity, density, and institutional and cultural characteristics, to better explain when individual or complementary strategic orientations improve firm performance (Hult et al., 2004; Zhou et al., 2005). Internal factors are also relevant considerations. For instance, Slater and Narver (2000) argue that MO is primarily concerned with learning from contacts with customers and competitors, whereas EO implies learning from experimentation. Organizational structure and/or leadership style might also shed additional light on these relationships. In general, it is our hope that this study sparks additional research exploring the interaction of EO, MO, and LO, and the concept of proactive learning culture. Apart from strategic orientations, commonality analysis can also be applied to other concepts in management, marketing, and entrepreneurship research, such as exploration and exploitation, competition and co-operation, effectuation and causation, incremental and radical innovation, opportunity discovery and creation, to help answer the extent to which variation in key aspects of firm performance and growth are explained by unique and shared effects. This methodology offers a useful approach to examine such constructs in different competitive scenarios and environmental settings, and promotes a new lens for strategic orientation studies.

7. Conclusion

Three major strategic orientations have attracted considerable research interest – EO, MO, and LO. We observe that when combined, these fundamental organizational strategic orientations give rise to a higher order construct labeled PLC. Commonality analysis further reveals that firm sales growth is impacted more by EO, than MO or LO. Specifically, although the shared effects at the intersection of all three strategic orientations, i.e., PLC, exceed the explanation of bilaterally shared effects, the unique effect of EO on firm performance is even stronger. It is our hope that this research will inspire future investigations that examine and compare firm strategic orientations.

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Declarations of interest

None.

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References


Publication II

Beliaeva, T., Shirokova, G., Wales, W. and Gafforova, E.

Benefiting from economic crisis? Strategic orientation effects, trade-offs, and configurations with resource availability on SME performance

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Publication III

Beliaeva, T., Marino, L., Shirokova, G. and Wales, W.

Institutional contextualization of the entrepreneurial orientation-performance relationship

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Academy of Management

Proceedings of the 78th Annual Meeting of the Academy of Management,
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Institutional Contextualization of the Entrepreneurial Orientation-Performance Relationship

ABSTRACT

While a significant body of literature has explored the link between entrepreneurial orientation (EO) and firm performance, most research has focused on single country settings without considering potential institutional factors that may shape the relationship. In this study, we investigate the impact of institutional elements of the external environment on the relationship between EO and firm performance across 41 countries. Drawing on Whitley’s “national business systems” (NBS) institutional framework we theorize and empirically examine the extent to which several key national-level institutions may influence the EO-performance linkage. We test our proposed relationships with data from a cross-country study of early stage entrepreneurship conducted in 2016 (n = 6389 firms). Results indicate that some institutional elements, such as financial systems and supportive cultures, enhance the benefits a firm receives by adopting an EO, whereas other elements, such as legal and educational systems, appear to weaken the positive effect of a firms’ EO on performance.

Keywords:
Entrepreneurial orientation; entrepreneurial activity; firm performance; institutional environment; national business systems
Institutional Contextualization of the Entrepreneurial Orientation-Performance Relationship

INTRODUCTION

Over the last decades, entrepreneurial orientation, typically encompassing innovative, proactive, and risk-taking firm activity (Covin & Slevin, 1989; Miller, 1983), has been extensively studied in the literature and has been shown to be related to firm performance (Rauch, Wiklund, Lumpkin, & Frese, 2009; Wales, Gupta, & Moussa, 2013). Many empirical studies report a positive relationship between EO and firm performance across different national contexts (Kreiser, Marino, Kuratko, & Weaver, 2013; Saeed, Yousafzai, & Engelen, 2014), establishing the international relevance of EO. However, while most studies are consistent, suggesting a positive effect from manifesting an orientation towards entrepreneurial activity, some empirical results have found either a negative (Frank, Kessler, & Fink, 2010; Matsuno, Mentzer, & Ozsomer, 2002) or a curvilinear EO-performance relationship (Dai, Maksimov, Gilbert, & Fernhaber, 2014; Tang, Tang, Marino, Zhang, & Li, 2008; Wales, Patel, Parida, & Kreiser, 2013). Further, the strength of this relationship varies significantly across studies (Rauch et al., 2009; Saeed et al., 2014), signifying that certain conditions and institutions may shape firm entrepreneurial activity and impact performance (Lee & Peterson, 2000; Marino, Strandholm, Steensma, & Weaver, 2002).

Scholars have identified several important institutional considerations when investigating the prevalence and effectiveness of organizational orientations across national contexts (Hoskisson, Eden, Lau, & Wright, 2000; Saeed et al., 2014). In this vein, national-level institutions determine the context in which strategies are developed, implemented and influence the efficacy of these strategies (Bruton, Ahlstrom, & Li, 2010). National-level institutions
regulate access to resources critical to support business operations and determine the level of uncertainty surrounding business actions and interactions (Li & Zahra, 2012). According to institutional theory, firms’ entrepreneurial behavior may be strongly influenced by their country’s formal and informal institutions (North, 1990), which may either facilitate or impede entrepreneurship and the exhibition of an entrepreneurial orientation.

Stressing the research potential of examining the role of institutions in affecting firms’ entrepreneurial orientation and outcomes, it has been observed that empirical research scarcely addresses which country-level contingencies affect the EO–performance linkage (Semrau, Ambos, & Kraus, 2016). Saeed et al. (2014) investigated a broad number of cultural and macroeconomic contingencies, including institutional factors that may affect the EO–performance relationship across countries and cultures using meta-analysis. They observed that entrepreneurially-oriented firms benefit from political stability, but not regulatory quality and concluded that more research is needed to understand the nuances and complexities of how institutions affect EO. In addressing this call for research examining the relevance of national-level institutional differences in the EO-performance relationship a broader focus beyond the comparison of a small number of countries is warranted (Kreiser et al., 2013; Semrau et al., 2016). Examining a broader number of countries will provide deeper insight into the systematic nature of national institutions and the institutional factors which could moderate the EO and firm performance relationship.

In this study, we address this gap by proposing a model that examines how different elements of a country’s institutional environment may either amplify or attenuate the EO-performance relationship. For this purpose, we adopt a national business systems institutional framework (Whitley, 1999). This framework captures systematic differences among countries in terms of their organization of economic activity, encompassing national institutions related to
their legal, financial, and educational systems, and cultural norms (Pezeshkan, Smith, Fainshmidt, & Sedeh, 2016). Specifically, we investigate the moderating role of these fundamental institutions upon the EO-performance relationship and address the following timely research questions: Does the development of legal institutions in a country enhance the benefits from a firm’s entrepreneurial orientation? Is the EO-performance relationship contingent upon the development of country’s financial institutions? Does a country’s education with regard to entrepreneurship affect the performance of its entrepreneurially-oriented firms? Are the performance effects of EO sensitive to supportive cultural norms?

In addressing these questions we develop and test a set of hypotheses using robust data on start-ups from the 2016 Global University Entrepreneurial Spirit Students’ Survey (GUESSS). In selecting our sample, we included only active founders which resulted in 6389 firms across 41 countries. In doing so, this study offers several contributions to the literature. First, it addresses the call for greater contextualization of research in entrepreneurship and management (Martens, Lacerda, Belfort, & Rodrigues de Freitas, 2016; Zahra, Wright, & Abdelgawad, 2014) by offering insight into how four key institutional factors may significantly influence how well firms’ are able to translate their EO into firm performance. By applying a national business systems framework, this research adopts a holistic view on the institutional environment and analyzes the development of legal systems, financial systems, education systems, and cultural norms across a large number of national contexts. Second, this study examines and reports findings on the EO-firm performance relationship using one of the most robust and globally expansive samples ever collected on the phenomenon. Finally, the study contributes to the international entrepreneurship research in general by advancing the consideration of a broader socioeconomic perspective within the comparative study of entrepreneurship (Terjesen, Hessels, & Li, 2016).
The paper proceeds as follows. First, we develop the theoretical framework for our study and advance our research hypotheses. We then describe the sampling procedure and measurement approach, followed by the results of the data analysis. Lastly, we discuss our findings, present implications and limitations of the study and suggest directions for future research.

THEORY AND HYPOTHESES

Entrepreneurial Orientation and Firm Performance across National Contexts

Entrepreneurial orientation refers to a strategy making process that guides firms to develop constant innovations, pursue proactive opportunities, and embrace risky projects (Covin & Slevin, 1989; Stam & Elfring, 2008). When viewing EO as an overall strategic orientation, a firm is considered to be entrepreneurial when innovativeness, proactiveness and risk-taking components are all developed at a high level (Covin & Slevin, 1989). EO allows firms to identify and capitalize on emerging business opportunities, being first on the market to introduce new products and services, and reconfiguring resources at hand with a purpose to utilize them more efficiently (Rauch et al., 2009). EO can serve as a source of sustainable competitive advantage and lead to superior firm performance (Aloulou & Fayolle, 2005; Grande, Madsen, & Borch, 2011; Wiklund & Shepherd, 2011) including sales performance (Spillecke & Brettel, 2014) and profitability (Gupta & Gupta, 2015) in both the short and the long run and in different national contexts.

The EO concept has been found to be applicable and valid across a breadth of firm types and different national contexts. In examining the role of EO in organizational performance it is widely accepted that a main effect-only perspective provides an incomplete picture and more complex relationships are warranted (Wiklund & Shepherd, 2005). Consistent with this assertion recent empirical research indicates that the strength of the EO-performance relationship is...
contextually determined (Wales et al., 2013). As noted by Saeed et al. (2014) in their meta-analysis, there is a considerable variance in EO-performance relationship across studies that can be attributed to a large extent to the national-level contextual factors. In an effort to clarify the EO-performance relationship, we seek to determine the extent to which nation-level institutional differences may potentially moderate this relationship.

**National-level Institutional Contingencies of the EO-Performance Relationship**

Institutional environments have often been investigated to explain the differences in various types of strategies and the performance outcomes of these strategies across national contexts. Organizations have long been considered to be embedded within broader social structures, comprising different institutions that exert significant influence on strategic decision-making (Ioannou & Serafeim, 2012). The institutional environment defines, creates, and limits entrepreneurial opportunities, and further determines the boundaries of acceptable strategic actions, and the process of gaining legitimacy, which is critical for organizations to increase their survival and performance prospects (Kreiser, Marino, Dickson, & Weaver, 2010; Manolova, Eunni, & Gyoshev, 2008).

To identify the most relevant institutional factors, we draw upon the National Business Systems (NBS) framework (Whitley, 1999, 2002) which assumes that economic activities are socially constituted and institutionally variable, and, consequently, the ways competitive processes operate and their outcomes vary significantly between the contexts (Hotho, 2014; Lim, Morse, Mitchell, & Seawright, 2010; Morgan, 2007; Valiukonyte & Parkkonen, 2008; Whitley, 1999). Grounded in economic and sociological perspectives, this multi-facet framework accounts for a comprehensive set of institutional factors that differentiate business systems and determine economic decision making and behavior within a country. The NBS framework identifies four
major categories of institutional factors (Whitley, 1999). Specifically, a business system is defined according to: the government (its legal system), its financial system, its system for developing skills (education system), and normative relations (Lim et al., 2010; Whitley, 1999). Our choice of Whitley's NBS framework is based on the empirical evidence that a few key institutions are critical for firm behavior, owing to their impact on the relationships between the firm and its primary stakeholders: the political, the financial and the labor institutions (Ioannou & Serafeim, 2012). These institutions influence the resources that are key to business success — financial, human, and social capital — and, thereby, may affect the scope of strategic choices available to firms, firm behavior and performance within a country. Utilizing this framework, we examine institutional determinants of the EO-performance relationship and argue that the performance impact of entrepreneurial strategic posture is strongest when its underlying strategic choices fit well with institutional variables.

The legal system. The features of legal structures and policies that shape decision-making include the dominance of the state and formal regulation of markets (Whitley, 1999). The regulatory institutional environment consists of laws, regulations, and government policies, which provide support and reduce risks of doing business. The rule of law refers to the supremacy of law whereby decisions are made by the application of known principles and laws, and signifies the extent to which agents have confidence in and abide by the rules of society (Lindsay, Ashill, Roxas, & Victorio, 2014). The quality of property rights protection, contract enforcement, affordability of the court system and the judiciary’s freedom can motivate the adoption of entrepreneurial orientation and enhance subsequent performance outcomes (Bowen & De Clercq, 2008). Specifically, firms are more likely to develop innovations and act proactively to commercialize them when institutions provide secure property rights. Regulatory effectiveness and strong intellectual property rights protection influence the ability of firms to
generate value from their innovation initiatives, while weak property rights protection decreases innovation because firms fear piracy and other forms of expropriation which may put the returns from entrepreneurial orientation at risk (Pezeshkan et al., 2016; Saeed et al., 2014). Besides this, the absence of effective legal structures to protect property rights and fair competition decreases transactional trust and makes the risk and costs of doing business high. Therefore, it can be argued that in countries with well-developed regulatory institutions, entrepreneurial behavior will be facilitated and rewarded, and the legal system will positively moderate EO-performance relationship:

**Hypothesis 1.** A country’s level of legal system development positively moderates the relationship between entrepreneurial orientation and firm performance, so that in countries with well-developed legal institutions the EO-performance relationship is stronger.

**The financial system.** A country’s financial system can provide firms with the resources necessary to fund existing business operations and to finance new projects. For new and small firms, ease of access to loans and capital availability is of paramount importance. Financial capital represents the most flexible organizational resource as it can be relatively easily transformed into other forms. As such it can help guard against resource constraints in key operational areas (Wiklund & Shepherd, 2005). Entrepreneurial orientation is inherently a resource-intensive strategic orientation, which requires ample resources to implement and maintain it at a high level (Covin & Slevin, 1991). Promoting entrepreneurial activities and innovations requires well-functioning financial markets which play critical role in reducing financing costs, allocating resources, evaluating innovative projects, and managing risks (Hsu, Tian, & Xu, 2014; Pezeshkan et al., 2016). The increased access to bank credit, creation of investment companies, lower interest rates and credit guarantee programs contribute to the
implementation and benefit of entrepreneurial initiatives. On the contrary, financial constraints oftentimes limit business investments in opportunity-based entrepreneurial activities. Overall, the availability of financial resources enhances the pursuit of strategic objectives (Bai, Lu, & Tao, 2006), favors innovations, encourages risk management, and, as such, may empower entrepreneurial orientation and strengthen its relationship with business performance. It is, therefore, hypothesized:

Hypothesis 2. A country’s level of financial system development positively moderates the relationship between entrepreneurial orientation and firm performance, so that in countries with well-developed financial institutions the EO-performance relationship is stronger.

The skills development system. Education and training are integral components of the socioeconomic infrastructure (Lim et al., 2010). The system for developing skills consists of interrelated sets of institutions and includes education and training institutions, which develop and certify competences and skills, and institutions that control the terms on which the owners of skills sell them in the labour market (Whitley, 1999). The quality of a country’s education system determines the availability of valuable human capital, and firms depend on a supply of skilled labour in order to operate and achieve innovative output and higher returns (Pezeshkan et al., 2016; Verheul, Wennekers, Audretsch, & Thurik, 2002). Studies distinguish “general education” from “specific education” (i.e., education that focuses on the developing of specific entrepreneurial skills), since the later may be more instrumental in explaining the performance outcomes of entrepreneurial behavior (Bowen & De Clercq, 2008). Prior studies indicated that country level entrepreneurship education system is more likely to produce specific knowledge required to develop successful entrepreneurial strategy (e.g., Chen, Green, & Crick, 1998). Moreover, based on the human capital theory, that claims that the more specific an investment is
to its intended use, the higher will be the expected return (Becker, 1975), we argue, that firms operating in a country with a higher quality entrepreneurship education system have better access to high-quality human resources who are better able to sense promising entrepreneurial opportunities and to realize them more effectively and efficiently thus enhancing the impact of the innovative, proactive and risk taking behaviours a firm my undertake. Therefore, it can be expected that entrepreneurship education enhances the entrepreneurial behavior in a firm, yielding higher levels of performance, and it is hypothesized that:

Hypothesis 3. A country’s level of entrepreneurship education positively moderates the relationship between entrepreneurial orientation and firm performance, so that in countries with higher level of entrepreneurship education the EO-performance relationship is stronger.

Normative relations. Finally, informal normative institutions impact the economic behavior that takes place within a country. Normative institutions influence the degree to which a country’s residents admire entrepreneurial activity and value creative and innovative thinking (Busenitz, Gómez, & Spencer, 2000). Cultural norms affect economic behaviors through shared behavioral and legitimacy norms as well as joint expectations and preferences (Autio, Pathak, & Wennberg, 2013). Accordingly, differences in cultural norms lead to differences in the managerial practices in firms, so the normative institutions can impact the effectiveness with which a strategic behavior like EO is implemented (Kirca, Jayachandran, & Bearden, 2005). Prior cross-cultural research demonstrates that the effect of management practices on firm performance increases when these practices fit with the cultural norms because people feel comfortable with these norms and act accordingly (Lachman, Nedd, & Hinings, 1994; Newman & Nollen, 1996; Saeed et al., 2014). Therefore, it is expected that the level of cultural support towards
entrepreneurship will contribute to entrepreneurial orientation and enhance performance benefits from its adoption. Formally:

*Hypothesis 4. A country’s level of cultural support towards entrepreneurship positively moderates the relationship between entrepreneurial orientation and firm performance, so that in countries with higher level of cultural support the EO-performance relationship is stronger.*

An overview of the research model is presented in Figure 1.

METHOD

Sample

To test these hypotheses, we employed data collected as part of the Global University Entrepreneurial Spirit Students’ Survey (GUESSS) in 2016. The survey was initiated by the Swiss Research Institute of Small Business and Entrepreneurship at the University of St. Gallen. Since its first launch in 2003, the survey has been conducted every two years. An essential part of the survey is devoted to measuring university students’ entrepreneurial activities including characteristics, behaviour and performance outcomes of their businesses.

In 2016, 50 countries took part in the survey. The sample included 122,509 students, divided into three categories: students with no intention to found their own business, intentional founders, and active founders. Reflecting the study’s purpose, our sample included only active founders who own and manage their own business. This sub-sample accounts for 10,820 responses. Exchange students were excluded in order to provide unbiased estimators of

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1 For more details see (Sieger, Fueglistaller, & Zellweger, 2016)
institutional characteristics. We also excluded the cases with less than 10 respondents from a country to allow within-country variability. After cleaning the data for missing and extreme values, the final usable sample included 6,389 firms from 41 countries\(^2\). The firms in the sample were, on average, 2.14 years old. The majority of firms are small with an average of 4 employees (SD = 6.28). Most of the firms operate in trade industry (wholesale/retail) (18.58 percent), advertising/design/marketing (12.96 percent), and information technology and communication (8.92 percent). The distribution of firms by industry is presented in Table 1.

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Insert Table 1 about here
---

Despite the fact that the usage of student samples in entrepreneurship and management research is often criticized (Smolka, Verheul, Burmeister-Lamp, & Heugens, 2016), recent studies provided evidence that student entrepreneurs are comparable to expert entrepreneurs in terms of entrepreneurial decision-making (Politis, Winborg, & Dahlstrand, 2012; Shirokova, Osiyevskyy, Morris, & Bogatyreva, 2017). An increasing number of scholars have used GUESSS data to address various research questions, such as the entrepreneurship career choice intentions (Beliaeva, Laskovaia, & Shirokova, 2017; Sieger & Monsen, 2015), effect of family support on start-up activities (Campopiano, Minola, & Sainaghi, 2016; Criaco, Sieger, Wennberg, Chirico, & Minola, 2017; Edelman, Manolova, Shirokova, & Tsukanova, 2016), the relationship between entrepreneurial decision-making and firm performance (Laskovaia, Shirokova, & Morris, 2017; Smolka et al. 2016)\(^3\).

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\(^2\) Countries included in the study: Argentina, Australia, Austria, Belarus, Belgium, Brazil, Canada, Chile, China, Colombia, Croatia, Czech Republic, Ecuador, El Salvador, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Kazakhstan, Korea S., Lithuania, Malaysia, Mexico, Morocco, Pakistan, Panama, Peru, Poland, Portugal, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Uruguay, USA.

\(^3\) More information about research publications based on GUESSS data can be found at: http://www.guesssurvey.org/publications/publications/academic-journals.html

12
Variables

To measure the constructs we relied both on the established scales and objective measures.

**Dependent variable.** As a dependent variable, we used a subjective performance indicator based on self-reported performance measures. Firm performance was operationalized by the respondents’ assessment on a 7-point Likert scale of how well their business performed as compared to other businesses selling similar products/services in the following aspects (1 = very poor, 7 = very well): making profit, sales growth, market share growth, and job creation. Prior studies have demonstrated high correlations among objective and subjective measures of firm performance (Ling & Kellermanns, 2010; Schulze, Lubatkin, Dino, & Buchholtz, 2001) and convergent validity of subjective measures (Dess & Robinson, 1984) which makes the latter a reliable indicator of business performance.

**Independent and moderator variables.** For assessing the level of a firm’s entrepreneurial orientation, we used an established nine-item 7-point Likert scale of Atuahene-Gima and Co (2001) adapted from Covin and Slevin (1989). The scale is comprised of three items for each dimension of innovativeness, proactiveness, and risk-taking.

To estimate the effect of entrepreneurial orientation on firm performance in different institutional settings, we measured the moderator variables using objective indicators from global databases. The legal system was assessed as an average of rule of law and judicial independence indices that form the legal environment dimension of the 2016 International Property Rights Index (IPRI). The former index examines the quality of contract enforcement, property rights, police, and courts, as well as the likelihood of crime and violence. The latter index measures the judiciary’s freedom from influence by political and business groups. The financial system was captured as an average of ease of access to loans and venture capital availability indices obtained from the Global Competitiveness Report 2015-2016. On a seven-point Likert scale, the first
index assesses how easy it is to obtain a loan in a country where a firm operates, with only a good business plan and no collateral (1 = impossible, 7 = easy), and the second index evaluates whether entrepreneurs with innovative but risky projects can generally find venture capital in their country (1 = not true, 7 = true). To measure the education system related to entrepreneurship and focusing on the student sample utilized in the study, we used entrepreneurship education at post-secondary levels obtained from the 2016 Global Entrepreneurship Monitor National Expert Survey (GEM NES). This measure assesses the extent to which training in creating or managing SMEs is incorporated within the education and training system at higher education such as vocational, college, business schools, etc. Finally, to measure the supportive culture towards entrepreneurship, we used the annual average of the scores on five questions in the GEM NES for the last available year of 2013. These scores are similar when compared to previous years (2012 and 2011), indicating that cultural values do not change rapidly over time. The questions assess the degree of motivation and the status of entrepreneurship as a profession and these items are measured on a five-point Likert scale (1 = completely false; 5 = completely true): in my country, most people consider becoming an entrepreneur as a desirable career choice; the creation of new ventures is considered an appropriate way to become rich; successful entrepreneurs have a high level of status and respect; you will often see stories in the public media about successful entrepreneurs; most people think of entrepreneurs as competent, resourceful individuals (De Clercq, Danis, & Dakhli, 2010).

Control variables. We include a set of control variables to account for alternative explanations of firm performance: individual characteristics of founders, firm features and country level of development. The first group of individual-level control variables includes characteristics of entrepreneurs such as age, gender, field of study, level of study, and commitment to a firm. Age was measured as the actual age of the respondent in full years.
Gender was included as a dummy variable and coded as 1 for males and 0 – for females. We included the field of study as a set of dummy variables: Economics and Management, Natural sciences, Social sciences, and other sciences. For the level of study, three dummy variables were created: Undergraduate (Bachelor), Graduate (Master), and other (e.g., PhD / MBA). To assess how committed students are to their businesses, they were asked to indicate whether they want this business to become their main occupation after graduation. A positive answer was coded as 1, and the negative as 0.

The second group of firm-level control variables consists of the most widespread firm characteristics such as firm age, firm size and industry in which the firm operates and the number of partners. Firm age was included in the model as number of full years since the firm’s foundation. Firm size was measured as a natural logarithm of the number of full-time employees. To control for the type of industry in which the firm is mainly active, a set of dummy variables were created based on General Industrial Classification of Economic Activities (NACE): “Advertising/Marketing/Design”, “Architecture and Engineering”, “Construction”, “Consulting (HR, law, management, tax)”, “Education and training”, “Financial services (incl. banking, insurance, investment, real estate)”, “Human health and social work activities”, “Information technology (IT) and communication (incl. software & IT services)”, “Manufacturing”, “Tourism and leisure”, “Trade (wholesale/retail)”, “Other services (e.g., transportation)”, and “Other”. We controlled for the number of individuals who have an ownership stake in the business (from 0 to more than 3).

As a country-level control variable, we used GDP per capita in 2015, obtained from the World Bank database and transformed with a natural logarithm.
Common Method Variance Test

Since we relied on self-report assessments for measuring some of the study constructs (entrepreneurial orientation and firm performance), the results could potentially be influenced by common method variance bias (Podsakoff, MacKenzie, & Podsakoff, 2012). To test for the potential threat of the bias, a Harman’s one-factor statistical test was performed. The statistical test did not reveal a single factor accounting for the majority of the variance. The exploratory principal component factor analysis across study variables yielded six factors with eigenvalues greater than one, and the variance explained by the first factor accounted for 34.15 percent of the total variance. As no factor accounted for the majority of variance, it can be concluded that the data do not appreciably suffer from common method bias. In addition, the empirical analysis includes a number of interaction terms, which are unlikely to be perceived by respondents (Chang, van Witteloostuijn, & Eden, 2010).

RESULTS

Reliability and Validity of the Constructs

To validate the measurement model for the latent variables examined (entrepreneurial orientation and firm performance) we performed a confirmatory factor analysis (CFA) using maximum likelihood estimation. The variables were assessed for unidimensionality, reliability, and validity.

CFA helps to specify a measurement model defining the relationship between each latent variable and its constituent items, and to identify problematic items in the constructs. Based on the factor loadings and fit statistics, item 3 was removed from the EO scale, which resulted in an improvement of the overall model fit. Entrepreneurial orientation, as the second-order scale, was tested separately from the first-order scale of firm performance. Both measurement models demonstrated an appropriate fit to the data (entrepreneurial orientation/ firm performance: χ²/df =
6.668 / 0.005; GFI = 0.996 / 1.000; TLI = 0.991 / 1.000; CFI = 0.995 / 1.000; RMSEA = 0.030 / 0.000), indicating that all items load on singular underlying latent variables. The Cronbach alphas for EO and firm performance constructs are 0.848 and 0.893, respectively, which is well above the 0.70 threshold (Nunnally, 1978), establishing the reliability of the measures. All scale items significantly \( p < .001 \) loaded on their corresponding latent constructs with the smallest factor loading being 0.660, which exceeds the 0.50 threshold and confirms the constructs’ convergent validity. The Composite Reliability (CR) index of each construct is 0.90, which is above the cut-off point of 0.70. The Average Variance Extracted (AVE) index is 0.75 for EO and 0.69 for firm performance, exceeding the 0.50 level. AVE indices were much higher than the squared correlation coefficient between the constructs (0.15), establishing the discriminant validity (Fornell & Larcker, 1981). The list of items, standardized factor loadings, and reliability and validity statistics for latent variables are presented in Table 2.

Finally, the resulting value of firm performance was calculated as an average score on all the items. To obtain the EO value, the item scores were averaged for each dimension of innovativeness, proactiveness, and risk-taking, which were then averaged to evidence the given orientation.

The descriptive statistics of the sampled firms and the correlation matrix for the variables are presented in Tables 3 and 4. The test for multicollinearity demonstrates that all variance inflation factor (VIF) indices are within an acceptable range with an average VIF of 1.85 and maximum of 4.01, assuaging possible concerns of multicollinearity and implying that the model with all variables included can be estimated.
Hypothesis Testing

To capture the hierarchical structure of GUESSS data where firms are nested in countries, we employed a hierarchical linear modeling (HLM) approach. This multilevel data analysis method helps to clarify the effects among variables measured at different levels and to detect relationships that may not be identified using traditional analysis techniques (Raudenbush & Bryk, 2002; Todd, Crook, & Barilla, 2005). In this study, we estimated two-level regression models one at the individual level and one at the country level. Hypothesis testing was performed using a number of nested models: all control variables (Model 1), the main effect of EO (Model 2), interaction effects of EO with each institutional variable (Models 3-6), and interaction effects of EO with all institutional variables included (Model 7). To facilitate the interpretation of results and to avoid the potential multicollinearity problem in more complex models with interaction effects, prior to calculating the interaction terms we mean centered the variables (Aiken & West, 1991). The results of hypotheses tests are presented in Table 5.

The control variables were included in Model 1 and reveal significant positive effects of firm size ($b = 0.374, p < .001$), commitment to the firm ($b = 0.333, p < .001$), and number of partners ($b = 0.039, p < .05$), and a significant negative effect of GDP per capita ($b = -0.370, p < .001$) on firm performance. There were also some significant industry effects. Model 2 adds the direct effect of entrepreneurial orientation and shows its positive relationship with firm performance ($b = 0.384, p < .001$) which is stable across other model specifications. The obtained effect is in line with our theorized role of EO in a firm and prior studies on EO importance for firm performance.
The next step of the analysis tested the interaction effects of EO with four institutional variables both separately (Models 3-6) and together in one model (Model 7). The results reveal significant positive moderation effects of the financial system ($b = 0.197$, $b = 0.212$, $p < .001$) and supportive culture ($b = 0.242$, $p < .001$, $b = 0.119$, $p < .05$) on the EO-performance linkage in both model specifications. Thus, Hypotheses 2 and 4 are supported. At the same time, we discovered the significant negative interaction effects of EO with the legal system ($b = -0.025$, $p < .05$) and entrepreneurship education ($b = -0.138$, $p < .01$) on firm performance in Model 7. These results contradict the hypothesized effects, thus, Hypotheses 1 and 3 are not supported.

To better understand the nature of the impact of institutional factors on the relationship between EO and firm performance the interaction effects obtained in Model 7 were plotted at different values of the moderators. The level of EO was plotted on firm performance for high (one standard deviation above the mean) and low (one standard deviation below the mean) values of the institutional variables (Figure 2).

As Figure 2 indicates, the marginal benefit of entrepreneurial orientation increases at a higher rate when the levels of financial system development and supportive culture are high (charts b and d). The slightly higher performance benefits of EO are also achieved with low levels of legal system development and entrepreneurship education (charts a and c).

In a post-hoc analysis, we estimated the model with overall quality of education system instead of entrepreneurship-specific education as a moderator between entrepreneurial orientation and firm performance. The quality of education system was obtained from the Global Competitiveness Report 2015-2016 and assessed how well the education system in the country meets the needs of a competitive economy (1 = not well at all; 7 = extremely well). The results
revealed a positive moderating effect of this variable ($b = 0.050, p < .01$), suggesting that the EO-performance relationship is stronger at higher levels of country’s overall education quality.

Besides this, we estimated the model separately in two groups of countries divided by income level, based on the World Bank classification of countries according to 2016 gross national income (GNI) per capita. All countries were classified in (1) lower and upper middle income countries (16 countries), and (2) high income countries (25 countries). The results of the analysis revealed differences in how institutional environment moderates the EO-performance relationship in two country groups (Appendix). Specifically, except a country’s financial system, which positively moderates the EO-performance linkage in both groups ($b = 0.175, p < .001$ and $b = 0.148, p < .05$, respectively), the legal system, entrepreneurship education and supportive culture enhance performance from EO in the lower and upper middle income countries ($b = 0.182, p < .001$ / $b = 0.267, p < .001$ / $b = 0.534, p < .001$), while decreases it in high income countries ($b = -0.053, p < .10$ / $b = -0.253, p < .01$ / $b = -0.156, p < .10$), demonstrating that the way entrepreneurial orientation affects firm performance varies with the level of country’s economic development.

**DISCUSSION AND IMPLICATIONS**

The importance of EO as an internationally relevant phenomenon is no longer a contested issue (Covin & Miller, 2014). However, most research on EO has been conducted within single country contexts, and has examined industrial-task environmental considerations as moderating factors that shape the EO-performance relationship (Covin & Lumpkin, 2011; Miller, 2011). Studies which have taken a broader macro-economic focus have predominantly focused solely on cultural moderators of the EO-performance relationship (Kreiser et al., 2013; Semrau et al., 2016). Yet, a substantial space for contribution within EO research remains concerning the
development of contextual studies examining key aspects of country’s institutional systems. Much less is known about how key institutional factors in addition to culture that may affect firms’ EO-performance relationship. With this study, we help address this gap in our understanding of macro considerations and provide insight into the effect of EO on firm performance across different institutional environments by applying the National Business Systems institutional framework (Whitley, 1999), which identifies four major categories of institutional factors that determine economic activities and outcomes within a country.

Foremost, our findings confirm a significant and positive effect of EO on firm performance when controlling for national and institutional contexts (Rauch et al., 2009; Semrau et al., 2016). Firm’s with higher levels of EO are better able to identify and capitalize upon emerging business opportunities, proactively create and commercialize innovations and are more tolerant to risks. When firms’ strategic orientations exhibit these aspects, the firms improve their performance and outperform competitors (Grande et al., 2011; Wiklund & Shepherd, 2011). Moreover, referring to the specificity of our sample, the benefits from adopting an entrepreneurial strategic posture are also relevant to student startups which are generally smaller and younger, and founders of which do not have ample experience in managing a business.

More significantly, following the call for greater contextualization of entrepreneurship research (Martens et al., 2016; Welter, 2011; Zahra et al., 2014), we scrutinize the link between EO and firm performance across different institutional settings. The study offers a more nuanced perspective on this relationship by revealing several important institutional factors that shape the performance outcomes expected from adopting an EO. It was found that the strength of the positive EO-performance relationship varies considerably across the national contexts examined within our study, and this variance can be explained by four investigated institutional contingencies.
Particularly, a country’s level of financial system development enhances performance outcomes of EO when investigated on the total sample of firms as well as on two subsamples of firms from countries with lower and higher income levels, thereby confirming the hypothesized effect. Access to financial capital is often important, particularly for smaller firms which experience greater difficulties in raising capital, and are typically in worse negotiating positions due to less market power (Strøtmann, 2007). With greater access to financial resources, firms may empower their EO and implement a wider variety of entrepreneurial initiatives, which might otherwise be prohibited and lead to missed opportunities (Wiklund & Shepherd, 2005). Thus, our results are in line with notion that financial resources are important for developing innovations and high-risk projects. For instance, Bowen and De Clercq (2008) found a positive relationship between the level of financial development at the country level and the allocation of entrepreneurial efforts toward high-growth activities.

Similarly, we also observed that a country’s level of cultural support towards entrepreneurship positively moderates the EO-performance linkage (Saaed et al., 2014), and especially in lower and upper middle-income countries. A supportive culture creates informal incentives as economic actors perceive the social desirability of entrepreneurial actions (Autio et al., 2013). According to a strategic fit perspective, competitive advantage may be derived from appropriately aligning management practices with key characteristics of the external environment (supportive culture for entrepreneurship in this case) and internal strategy, systems and practices (Burn & Stalker, 1961; Powell, 1992). In this vein, the congruence between management practices and supportive characteristics of national culture has been shown to produce better performance outcomes (Newman & Nollen, 1996).

Our results further demonstrate that the remaining elements of a country’s institutional environment – the legal system and entrepreneurship education – appear to weaken the
relationship between EO and firm performance within the overall sample. These are unexpected findings as they contradict our hypotheses. However, as revealed in the post-hoc analysis, these institutions are shown to work in opposite directions within country groups divided by income level.

As prior studies have revealed, comprehensive regulation related to property rights protection, taxation and government policies, generally have a positive impact on entrepreneurial activity (Busenitz et al., 2000; Danis, De Clercq, & Petricevic 2011; Levie & Autio 2011). However, legal institutional settings can also hamper entrepreneurial behaviors as they may, for example, create strong constraints on economic activity, which may discourage entrepreneurial behavior and therefore decrease firm’s performance (Di Gregorio, 2005). Deficiencies in legal system, on the other hand, could make it easier for firms to exploit entrepreneurial opportunities, benefit from proactive behaviors, and capitalize from innovative ideas (Baker & Nelson, 2005; Shane & Venkataraman, 2000). Moreover, small firms can replicate existing products and services that allow them to benefit from innovation activities with limited resources at hand (Luo, Sun, & Lu Wang, 2011).

Another potential explanation is that the influence of legal systems on the EO-performance relationship may vary with the level of country’s economic development, which was demonstrated by the additional post-hoc analysis. While in higher income countries with transparent and well-functioning public institutions, additional institutional development might complicate regulations and impeded the benefits from EO. However, the development of institutional environments in lower income countries may contribute to performance outcomes from EO as legal rights to new innovations are protected to higher degrees thereby fostering gains from entrepreneurial activity.
The second unexpected finding concerns the negative role of entrepreneurship educational systems in the EO-performance relationship. According to Verheul et al. (2002), the quality of an educational system determines the availability of valuable human capital that can be leveraged to affect performance outcomes. However, the extent to which the country’s educational system promotes entrepreneurship is only one component of the quality of the human capital in a country. It is possible that entrepreneurship education could be focused more on developing the entrepreneurial mindset and providing people with knowledge for establishing a new business, rather than managing an existing firm, and could be more strongly related to entrepreneurial intentions and start-up (Bae, Qian, Miao, & Fiet, 2014), rather than the performance outcomes of entrepreneurially-oriented firms post-launch. Future research should consider the roles played by specific types of educational system (e.g. focused on promoting engineering and scientific skills) in the performance outcomes of firm’s entrepreneurial behaviours (De Clercq, Lim, & Hoon Oh, 2013). Moreover, we note that a country’s level of “general” human capital (indicating its overall educational system) positively moderated the EO-performance relationship, thus suggesting that education is beneficial, but that entrepreneurship education in particular has not fulfilled its promise as a driver of firm performance within nations’ economies.

Practically speaking, policy makers focusing on stimulating the development of entrepreneurship would be wise to consider the gravity of institutions in the ability of firms to leverage the full performance benefit from their EO. In this vein, policy makers are advised to set up programs for firms such as the provision of funding or easier access to credits to entrepreneurial firms.

While the sample for this study is a relatively homogeneous group of subjects, student entrepreneurs, replication studies with different groups of founders and/or CEOs would add additional insight into the role of institutions and strategic postures in firm performance.
Moreover, the cross-sectional data of this study unfortunately does not provide a basis for examining causal relationships, and there is potential for longitudinal studies to uncover variations in institutions, entrepreneurial orientation and firm performance over time. Finally, while common within research on strategic orientations, the main constructs of the study (entrepreneurial orientation and firm performance) were measured based on self-reported assessments by single key informants. Replication studies are encouraged using alternative objective measures of these variables. Additionally, we suggest that future studies consider other alternative and complimentary indicators of institutional development in general, and legal and educational systems in particular, in order to examine their moderating effects in more detail. Future research may also consider adopting a multidimensional conceptualization of EO to provide a yet finer grained model concerning how the performance outcomes of its separate dimensions are impacted by these institutional considerations. It is our hope that our research and ideas herein will spark additional studies and investigations at the important intersection of firms’ strategic orientations and institutional contexts.

REFERENCES


# TABLE 1
Industries Participating in this Study

<table>
<thead>
<tr>
<th>Industry</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising / Design / Marketing</td>
<td>828</td>
<td>12.96</td>
</tr>
<tr>
<td>Architecture and Engineering</td>
<td>316</td>
<td>4.95</td>
</tr>
<tr>
<td>Construction</td>
<td>260</td>
<td>4.07</td>
</tr>
<tr>
<td>Consulting (HR, law, management, tax)</td>
<td>332</td>
<td>5.20</td>
</tr>
<tr>
<td>Education and training</td>
<td>320</td>
<td>5.01</td>
</tr>
<tr>
<td>Financial services (incl. banking, insurance, investment, real estate)</td>
<td>249</td>
<td>3.90</td>
</tr>
<tr>
<td>Human health and social work activities</td>
<td>228</td>
<td>3.57</td>
</tr>
<tr>
<td>Information technology (IT) and communication (incl. software &amp; IT services)</td>
<td>570</td>
<td>8.92</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>382</td>
<td>5.98</td>
</tr>
<tr>
<td>Tourism and leisure</td>
<td>307</td>
<td>4.81</td>
</tr>
<tr>
<td>Trade (wholesale/retail)</td>
<td>1187</td>
<td>18.58</td>
</tr>
<tr>
<td>Other services (e.g., transportation)</td>
<td>292</td>
<td>4.57</td>
</tr>
<tr>
<td>Other</td>
<td>1118</td>
<td>17.50</td>
</tr>
<tr>
<td>Total</td>
<td>6389</td>
<td>100.00</td>
</tr>
</tbody>
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TABLE 2
Constructs, Measurement Items and Reliability and Validity Tests

<table>
<thead>
<tr>
<th>Variable</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entrepreneurial orientation</strong></td>
<td></td>
</tr>
<tr>
<td>(Atuahene-Gima &amp; Co, 2001; Covin &amp; Slevin, 1989): second-order factor; ( \alpha ) = 0.848; CR = 0.90; AVE = 0.75.</td>
<td></td>
</tr>
<tr>
<td>In general, my business as a whole favors... (1=first answer, 7=second answer)</td>
<td>0.98***</td>
</tr>
<tr>
<td>Innovativeness: first-order factor; ( \alpha ) = 0.658; CR = 0.62; AVE = 0.45.</td>
<td></td>
</tr>
<tr>
<td>1. A strong emphasis on marketing true and tried products / A strong emphasis on R&amp;D, technological leadership, and innovations.</td>
<td>0.66***</td>
</tr>
<tr>
<td>2. Minor changes in product or service lines / Quite dramatic changes in product or service lines.</td>
<td>0.67***</td>
</tr>
<tr>
<td>3. Introducing no new lines of products and services / Introducing very many new lines of products and services.</td>
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<tr>
<td>4. Being very seldom the first to introduce new products/services / Being very often the first to introduce new products/services.</td>
<td>0.71***</td>
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<tr>
<td>5. Responding to actions that competitors initiate / Being very often the first to introduce new products/services.</td>
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<td>6. Following the leader in introducing new products or services / Being ahead of competitors in introducing new products or services.</td>
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<td>(first-order factor; ( \alpha ) = 0.748; CR = 0.76; AVE = 0.51.</td>
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</tr>
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<td>7. A cautious, &quot;wait and see&quot; posture in order to minimize the probability of costly errors / A bold, aggressive posture in order to maximize the probability of exploiting opportunities.</td>
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<tr>
<td>8. A tendency for low-risk projects with normal and certain rates of return / A strong tendency for high-risk projects with chances of very high returns.</td>
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<td>9. Exploring the environment in gradual, cautious, and incremental acts / Exploring the environment in bold, wide-ranging acts.</td>
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<tr>
<td><strong>Firm performance</strong> (1 = very poor, 7 = very well): ( \alpha ) = 0.893; CR = 0.90; AVE = 0.69</td>
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<td>2. Sales growth</td>
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<td>3. Market share growth</td>
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<td>4. Job creation</td>
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Notes: \( \alpha \) = Cronbach alpha; CR = composite reliability; AVE = average variance extracted; n = 6389; a the item was omitted as a result of CFA; *** p < .001.
**TABLE 3**

Descriptive Statistics

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Notes: *p < .05 (two-tailed).
### TABLE 5
HLM Regression Results

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<th>Model 4</th>
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Notes: † p < .10, * p < .05, ** p < .01, *** p < .001. All reported significance levels are two-tailed.

Several countries were omitted because of the missing values of objective institutional variables.

Deviance index was used to assess the model fit. The deviance index is defined as the \(-2 \times \log\)-likelihood of a maximum-likelihood estimate. The smaller the deviance value, the better model fit (Raudenbush & Bryk, 2002).
FIGURE 1
Research Model and Hypothesized Relationships

Entrepreneurial orientation

Legal system

H1 (+)

Financial system

H2 (+)

Firm performance

H3 (+)

H4 (+)

Entrepreneurship education

Supportive culture

Control variables:
Individual-level: student age, gender, field of study, level of study, commitment to a firm
Firm-level: firm age, firm size, industry type, number of partners
Country-level: GDP per capita
FIGURE 2
Interactions Analyses: the Impact of Institutional Factors on the Entrepreneurial Orientation–Performance Relationship

a) Moderation effect of legal system

b) Moderation effect of financial system

c) Moderation effect of entrepreneurship education

d) Moderation effect of supportive culture
### APPENDIX

Post-hoc Analysis: HLM Regression Results for Two Country Groups by Income Level

<table>
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<th>High income countries</th>
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Note: *** p < 0.001, ** p < 0.01, * p < 0.05, † p < 0.10
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<th>547.50 (27)***</th>
<th>543.41 (27)***</th>
<th>527.01 (27)***</th>
<th>482.89 (33)***</th>
<th>467.88</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deviance</td>
<td>12656.78</td>
<td>12478.39</td>
<td>12450.20</td>
<td>12438.89</td>
<td>10757.32</td>
<td>10683.37</td>
<td>8975.79</td>
<td>8972.62</td>
<td>8975.53</td>
<td>8579.08</td>
<td>8118.09</td>
<td>7720.45</td>
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<td>n</td>
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<td>3739</td>
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<td>Countries</td>
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<td>25</td>
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<td>22</td>
<td>23</td>
<td>20</td>
</tr>
</tbody>
</table>

Notes: † p < .10, * p < .05, ** p < .01, *** p < .001. All reported significance levels are two-tailed.

*several countries were omitted because of the missing values of objective institutional variables.

Deviance index was used to assess the model fit. The deviance index is defined as $-2 \times \log$-likelihood of a maximum-likelihood estimate. The smaller the deviance value, the better model fit (Raudenbush & Bryk, 2002).
Publication IV

Bogatyreva, K., Beliaeva, T., Shirokova, G. and Puffer, S.M.
As different as chalk and cheese? The relationship between entrepreneurial orientation and SMEs’ growth: evidence from Russia and Finland

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23(4), pp. 337–366, 2017
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Publication V

Shirokova, G., Bogatyreva, K., Beliaeva, T. and Puffer, S.
Entrepreneurial orientation and firm performance in different environmental settings: contingency and configurational approaches

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