

Juha Soininen

ENTREPRENEURIAL ORIENTATION IN SMALL AND MEDIUM-SIZED ENTERPRISES DURING ECONOMIC CRISIS

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ABSTRACT

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The economic importance of small and medium-sized enterprises (SMEs) and entrepreneurship has increased significantly in recent decades and entrepreneurial activity and SMEs are deemed vital to economic progress. Therefore, it is justifiable to study how small firms and entrepreneurs can enhance their performance and emergence in the turbulent economic environment.

The concept of entrepreneurial orientation (EO) has recently attracted considerable attention in the field of entrepreneurship research. EO generally refers to a firm's propensity to be innovative, to be proactive and to take risks. A majority of EO studies so far have found that adopting EO associated entrepreneurial behaviors will help firms to create or sustain a high level of performance.

This dissertation explores the main drivers and performance implications of EO for SMEs in time of economic crisis. Hence the first objective of this dissertation is to examine the performance implications of EO and to test the role of EO on how firms are treated by the crisis at operative level. The second objective is to expand the prevailing understanding of determinants of EO by exploring the relationship between owner's work related values, attitudes, demographic characteristics, firm's financial resources and EO.

EO was found to be a significant and positive factor behind a firm's long run growth. Hence it can be said that EO has positive implications for firm performance. But on the other hand, during a time of economic crisis the different dimensions of EO had both positive and negative effects on performance of SMEs. The performance implications varied across different stages of the crisis and were also dependent on what measure was used for measuring the performance. The main drivers of EO in SMEs were the personal work related values of the entrepreneur and his/her prior experience as an entrepreneur. The intrinsic work values related to interest, responsibility, challenge, self-development or intellectual stimulation and values related to status, power, achievement and recognition had a positive effect on the level of EO. On the other hand, extrinsic values related to high income, material possessions, benefits such as generous holidays, job security, and comfort through good working conditions decreased the level of EO.

Keywords: entrepreneurial orientation, small and medium-sized enterprises, performance, economic crisis, work values, attitudes, behavior.

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Lappeenranta, September 2013

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PART II: ARTICLES

1. Soininen, Juha, Martikainen, Minna, Puumalainen, Kaisu and Kyläheiko, Kalevi (2012). **Entrepreneurial Orientation: Growth and Profitability of Finnish Small and Medium-Sized Enterprises.** *International Journal of Production Economics*, 140 (2), 614-621.
2. Soininen, Juha, Puumalainen, Kaisu, Sjögrén, Helena, Syrjä, Pasi (2012). **The impact of global economic crisis on SMEs – does entrepreneurial orientation matter?** *Management Research Review*, 35 (10), 927-944.
3. Soininen, Juha, Saarenketo, Sami, Puumalainen, Kaisu and Sjögrén, Helena (2011). **Does International Entrepreneurship Make Firms more Vulnerable? – The Impact of Global Economic Crisis on Finnish SMEs.** Presented in the proceedings of the 14th McGill International Entrepreneurship Conference, University of Southern Denmark, Odense, Denmark, September 16–18, 2011.
4. Soininen, Juha, Puumalainen, Kaisu, Sjögrén, Helena, Syrjä, Pasi and Durst, Susanne (2013) **Entrepreneurial Orientation in small firms: a values-attitudes-behavior approach.** *International Journal of Entrepreneurial Behaviour & Research*, 19 (6), (forthcoming).
5. Soininen, Juha, Puumalainen, Kaisu, Sjögrén, Helena and Syrjä, Pasi (2012) **What drives EO in small firms? Roles of the owner-manager and financial conditions.** Presented in the proceedings of the 17th Nordic Conference on Small Business Research, Helsinki, Finland, May 23–25, 2012

The contribution of Juha Soininen to the articles:

1. Wrote the most of the paper and had a central role in modifying the paper on the basis of the reviewers' comments
2. Wrote the most of the paper. Had a central role in modifying the paper on the basis of the reviewers' comments. Conclusions on the findings was a joint effort.
3. Wrote the most of the paper. Finalizing the paper was a joint effort with the co-author.
4. Wrote some parts for the first draft. Wrote most of the second heavily revised version of the paper. Conducted the data analysis and played a central role in modifying the paper on the basis of the reviewers' comments.
5. Wrote the most of the paper. Conducted the data analysis. Finalizing the paper was a joint effort with the co-authors.

PART I: OVERVIEW OF THE DISSERTATION

1. INTRODUCTION

1.1 Research background

The economic importance of small and medium-sized enterprises (SMEs) and entrepreneurship has increased significantly in recent decades, since large companies are increasingly concentrating on core competences and implementing mass lay-offs (van Stel *et al.*, 2005). Moreover, many scholars have recognized and demonstrated the crucial role played by SMEs as a driving engine of growth, job creation, competitiveness in global markets and the general health and welfare of economies both nationally and internationally. For example around 85 per cent of new jobs in the U.S. are created by small business (Audretsch, 2002; Lappalainen and Niskanen, 2009; Lappalainen and Niskanen 2012). As the entrepreneurial activity and SMEs are seen to be increasingly indispensable to economic progress, it is important to study how small firms and entrepreneurs can enhance their performance and ensure their survival in the turbulent economic environment. Coping with such harsh conditions may require firms to demonstrate special capabilities, internal resources or behaviors such as innovativeness, flexibility or adaptability. In that sense the strategic management and entrepreneurship literature may offer useful concepts to utilize when looking for possible remedies or enhancements for firm's chances of performing during economic crises. Hakala (2011) pointed out that several distinct strategic orientations of businesses, such as market, customer, learning, technology, and entrepreneurial orientations have gained considerable attention from both managers and management scholars. Several studies have provided evidence that one of these orientations alone (Kohli and Jaworski, 1990; Calantone *et al.*, 2002; Wiklund and Shepherd, 2005) and also the interaction between the orientations or different combinations of the orientations may provide a source of high performance or competitive advantage for firms (Hult *et al.*, 2004). As these strategic orientations are significant drivers of a firm's performance, we focus here on one of them, more specifically on entrepreneurial orientation.

In recent decades the concept of entrepreneurial orientation (EO) has attracted considerable attention in the field of entrepreneurship research. By EO we generally refer to a firm's propensity to be innovative, to be proactive and to take risks (Andersén, 2010). The EO

concept is widely used in the field of entrepreneurship. For instance Wales *et al.* (2011) pointed out that more than 150 studies of EO have been conducted, implying that the conceptual meaning of EO is widely accepted and that it is widely considered as relevant concept and a cornerstone in the literature on firm-level entrepreneurship. Most EO studies (e.g. Zahra, 1986; Covin and Slevin, 1990; Zahra and Covin, 1995; Wiklund, 1999; Wiklund and Shepherd, 2005; Kraus *et al.*, 2012) have focused on the EO-performance relationship and have found that adopting EO associated entrepreneurial behaviors will help firms to create or sustain a high level of performance (Covin and Slevin, 1991; Rauch *et al.*, 2009).

As the EO is a much studied topic and a great deal is known about it, when scholars like Wiklund and Shepherd (2011, p.925) ask “*are we at a point of saturation with little more to learn, or can future investigation of EO still make contributions to entrepreneurship literature?*” it is clear that new contexts or approaches to the theme are welcome. Miller (2011) points out that the performance implications of EO vary across contexts. The latest global economic crisis therefore offers a very fruitful context for studying the effects of EO on the performance of small and medium-sized enterprises. Moreover, Wiklund and Shepherd (2011) and Miller (2011) note that in future research on EO there is room for studies scrutinizing the mechanisms underlying the antecedents of EO, or how different resources may affect different aspects of EO.

1.2 Research gaps and objectives

Research on EO abounds, and the relationship between EO and firm performance has been most intensively studied (some recent empirical studies include Harms *et al.*, 2010; Grande *et al.*, 2011; Lechner and Gudmundsson, 2012; Eggers *et al.*, 2013; Kraus, 2013; Messersmith and Wales, 2013) Therefore, to be able to make a contribution to the literature one needs to identify certain gaps in the literature. Through a comprehensive inspection of the literature, it was possible to identify research gaps for this dissertation. Studies so far (Covin and Slevin, 1989; Zahra and Covin, 1995; Lumpkin and Dess, 2001) have noted that contextual influences affect how successful EO is in performance. In business environments especially, where rapid changes, hostility, uncertainty, and aggressive competition are present, a firm’s entrepreneurial posture plays an important role as a performance enhancing factor. The most

recent global economic crisis offers an exceptional context in which to study the performance implications of EO in small firms. During the period 2008-2009, the global economy faced its most serious recession and financial crisis since the Great Depression of the 1930's, and, as consequences of the crisis, Europe and the USA faced the collapses, government bail-outs or partial nationalizations of major financial institutions (Smallbone *et al.*, 2012). The crisis also affected the Finnish economy, since in the last quarter of 2008 the number of layoffs, order cancellations and financial difficulties increased drastically, leading among other things to a 30 per cent increase in the number of bankruptcies among the Finnish SMEs. Figure 1 gives a picture of the overall situation in the Finnish economy during a five-year period. It shows the development of Finland's GDP from 2006 to 2011, the most relevant time period for the purposes of this dissertation. The annual growth in GDP started to slow down in the last quarter of 2007. The growth turned negative in the third quarter of 2008 and stayed negative until the first quarter of 2010. It is noteworthy that data collection was at the end of Q2 in 2009 (the arrow in the figure). The entrepreneurs' opinions regarding their EO and how the recession was affecting their firms, were therefore captured in a situation when the Finnish economy overall was in recession as GDP has decreased for four consecutive quarters.

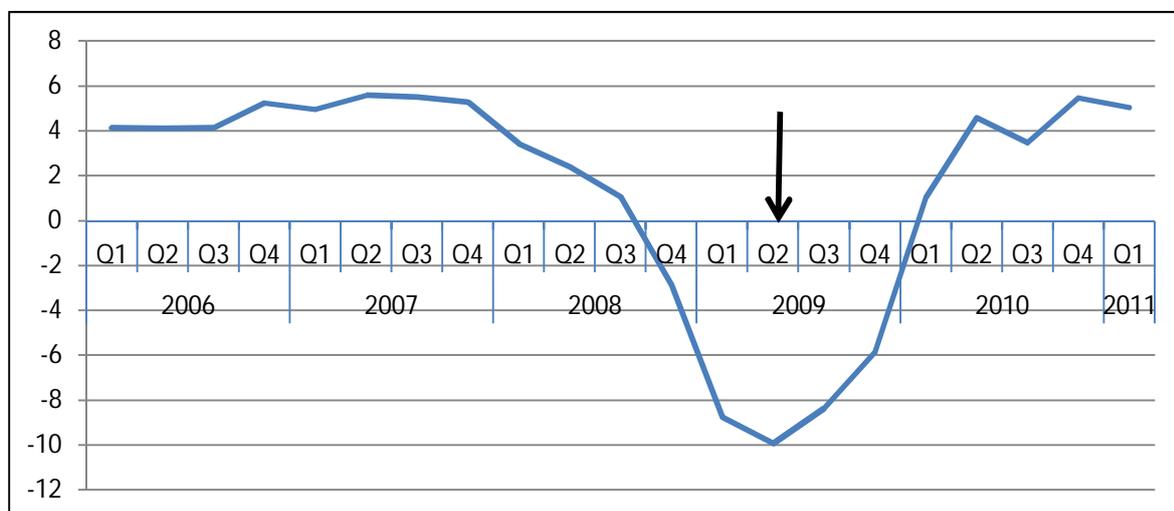


Figure 1. Annual Growth Percentage of Finland's GDP (Statistics Finland, 2011)

Studies focusing on firms' entrepreneurial activities and the performance implications in such extreme environmental and market turbulence are surprisingly scarce. Kraus *et al.* (2011) and Grewal and Tansuhaj (2001) are among the few studies where EO or strategic flexibility, which closely resembles the proactiveness dimension of EO, are related to business

performance under circumstances where firms were facing acute market uncertainty and instability. Hence, there is indeed a gap in the literature that justifies the existence of this dissertation.

Secondly, Vij and Bedi (2012) noted that there is no consensus among researchers on the appropriate measures of business performance indicators. This has led to a situation where a wide selection of performance measures i.e. objective and subjective measures have been used. In this dissertation we use objective data which is widely accepted by researchers to be a more appropriate measure than the subjective measures of performance, which are widely used in the EO literature (Covin *et al.*, 1994; Zahra and Neubaum, 1998; Lumpkin and Dess, 2001; Baker and Sinkula, 2009; Kraus *et al.*, 2012; Messersmith and Wales, 2013) as objective performance measures are very difficult to obtain (Vij and Bedi, 2012). The objective financial statement based data enable us to avoid the disadvantages inherent in subjective measures and to measure the multidimensional construct of performance from many different angles, such as growth, profitability, and liquidity, efficiency, size and leverage (Carton and Hofer, 2006). Hence, there is a minor gap in the literature related to the type of data used to measure business performance and this dissertation can contribute to bridging that gap.

Thirdly, although the literature on the determinants of entrepreneurship has flourished and expanded in the past three decades, there is still room for contributions. A number of studies (Reynolds *et al.*, 1994; Blanchflower and Oswald, 1998; Cowling, 2000; Lin *et al.*, 2000; Davidsson, 2006; Grilo and Irigoyen, 2006; Grilo and Thurik, 2008) have either focused on demographic determinants or macroeconomic determinants when explaining the level of entrepreneurship. Moreover, the number of studies explaining EO is very limited (Salvato, 1994; Morris *et al.*, 2007; Jalali, 2012; Meynhardt and Diefenbach, 2012; Zahra, 2013) often concentrating on the organizational, environmental or demographic (gender, age, level of education) factors that foster entrepreneurial behaviors. Furthermore, in the literature there is a clear need for empirical studies focusing on the personal characteristics of the entrepreneur or top manager as the owner's personality, values and identities are recognized as important, especially in the small firm context (Simsek *et al.*, 2010; Miller, 2011; Miller and Le Breton-Miller, 2011). To further emphasize the topicality of this dissertation, we can quote Pines *et al.* (2012, pp. 96) when they argued that “*in recent years research on entrepreneurial*

personality has re-emerged as an important topic of investigation and leading entrepreneurship scholars have noted that a psychological approach is necessary to understand entrepreneurship". Wiklund (1999) likewise argued that particularly when applied to small firms, EO might be seen as a result of individual-level determinants rather than firm-level outcomes. Therefore more research is needed focusing on the individual entrepreneur's personality in explaining EO and hence, thereby exposing a gap in the field of EO literature to be addressed in this dissertation.

Given the research gaps identified and objectives set, the research questions of this study are formulated as follows:

The main research question:

What are the main drivers and performance implications of EO for SMEs in time of economic crisis?

For a more detailed understanding of the phenomenon of interest, the main research question above is broken down into more detailed subquestions, which are the following:

Sub-question 1: What are the performance implications of EO and the role of EO in how firms are treated by the crisis at operational level?

Three of the five articles are aimed to answer the sub-question above. More detailed objectives of those three articles are the following:

Article 1: What are the implications of EO on the dynamics of profitability and growth?

Article 2: Can EO mitigate the negative effects of economic crisis on firms' performance and operations?

Article 3: How the dimensions of EO and the firm's level of internationalization affect its financial performance?

The articles above are related to the performance implications of EO and closely related to the approaches in the traditional EO-performance literature. The following sub-question is representing a novel approach to explain EO in response to the call for more psychology oriented approaches to explaining entrepreneurship in general.

Sub-question 2: What are the main drivers of EO in SMEs?

Two of the five articles are intended to answer the sub-question above. The aims of these two articles are the following:

Article 4: To ascertain the roles of entrepreneurs' work values and goal related attitudes as determinants of EO.

Article 5: To ascertain if entrepreneurs' work values, prior experience and firms' financial attributes explain the level of EO?

Each of the five research articles is intended to answer one of these sub-questions, culminating in a situation where comprehensive answers to the main research question can be evinced.

The main objective of this dissertation is to try to fill the abovementioned gaps in the literature. Figure 2 illustrates the general concepts covered in this dissertation with EO as the focal theoretical concept in each of the research articles forming the second part of the dissertation. The concepts in the rectangles are covered in one or more articles. The arrows in the figure indicate the proposed relationship between the concepts empirically tested in the research articles. SMEs during economic crisis is the context in which these relationships are studied. To put it in other words, the first broad objective of this dissertation to examine the implications for performance of EO during a time of extraordinary economic turbulence and to test the role of EO in how firms are treated by the crisis at operational level. The second broad objective of the dissertation is to extend the prevailing understanding of the

determinants of EO by exploring the relationship between owner's work related values, demographic characteristics, firm's financial resources and EO.

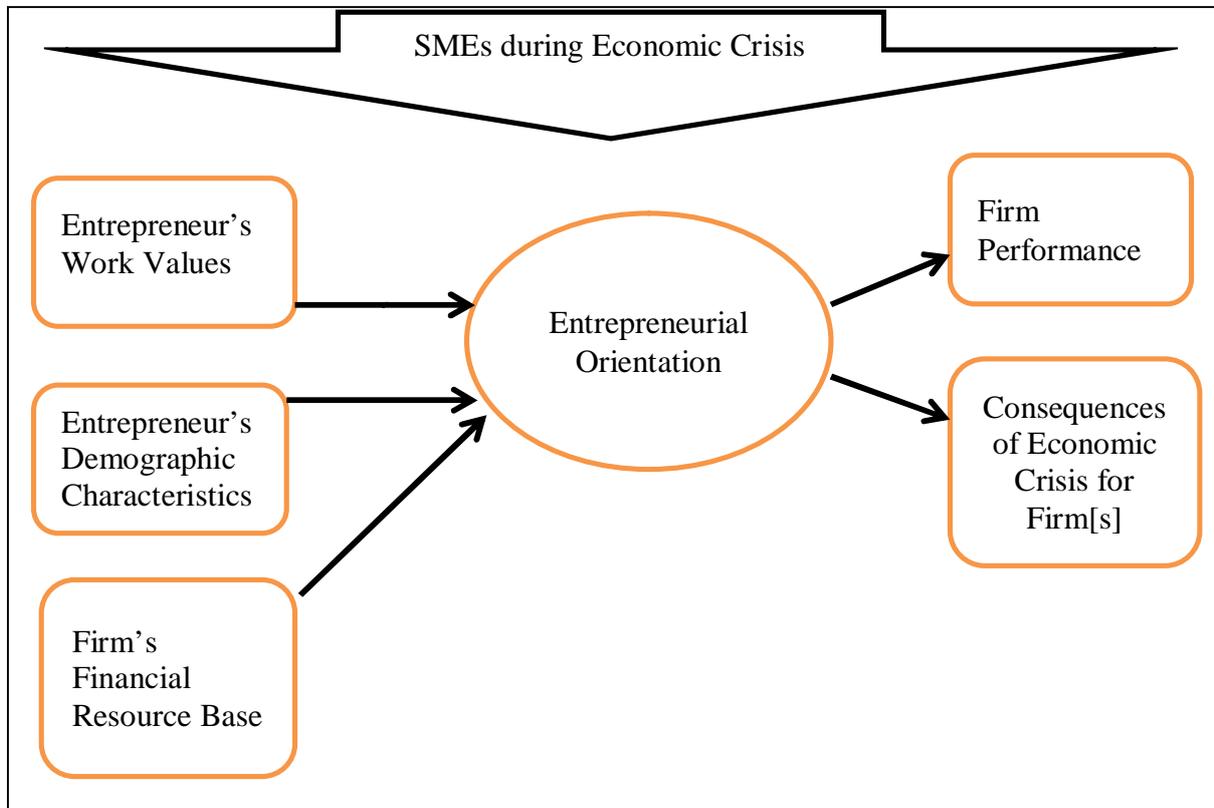


Figure 2. Conceptual framework of the dissertation

1.3 Definitions and scope

This section presents a brief definition of the key concepts in this dissertation. More detailed discussion is provided in the following chapter. The main theme in this dissertation is EO in Finnish small and medium-sized enterprises. EO is argued to be a multidimensional strategic construct which has become a central concept in the domain of entrepreneurship, having received a substantial amount of theoretical and empirical attention. In the literature EO is often claimed to comprise three separate dimensions, namely innovativeness, risk-taking, and proactiveness (Rauch *et al.*, 2009).

The three core dimensions of EO were conceptualized by Miller (1983) and can be defined as follows: *Innovativeness* is the inclination to commit to creativity and experimentation through

the introduction of new products/services as well as technological leadership via R&D in new processes. *Risk-taking* involves taking daring measures by venturing into the unknown, borrowing heavily, and/or committing remarkable resources to ventures in uncertain environments. *Proactiveness* is an opportunity-seeking, forward-looking perspective characterized by the introduction of new products and services ahead of the competition and acting in anticipation of future demand (Rauch *et al.*, 2009).

The second theme in the dissertation is the entrepreneur's work related values. According to Gahan and Abeysekera (2009) work values are often considered as a key determinant of many of an individual's work-related attitudes and behaviors and therefore it is appropriate to focus on them when examining the antecedents of EO.

Lyons *et al.* (2006, p. 607) defined work values as "generalized beliefs about the desirability of certain attributes of work and work-related outcomes". Gahan and Abeysekera (2009, p. 129) likewise stated that "*the concept of work values captures the end states that individuals desire and expect through working*". Like values in general work values are said to endure and remain stable over time and to be ordered hierarchically in the individual's mind (Rokeach, 1973; Lyons *et al.*, 2010). In spite of a plethora of different sets of values and definitions, there appears to be consensus in making a distinction among values between intrinsic, extrinsic and social or relational values (Gahan and Abeysekera, 2009). In addition to these three types of work values Ros *et al.* (2009) suggested a fourth value, namely which is related to status and recognitions.

The abovementioned values can be briefly defined as follows: *intrinsic* values refers to those rewards which derive from the work itself, like challenge, variety, self-development, sense of achievement or intellectual stimulation. Secondly, *extrinsic* values are related to those material benefits yielded by the job such as pay, benefits, job security, and comfort. *Status* values are related to prestige, influence and power, whereas *social* values are those pertaining to affective relations with other people (Gahan and Abeysekera, 2009; Lyons *et al.*, 2010).

The scope of the analysis in the dissertation is limited to small and medium-sized Finnish private limited companies. The informants of the survey from whom data related to EO and work values was gathered were the CEOs or owner-managers of the firms, meaning that in the

most cases the data reflects the values and entrepreneurial stance of the entrepreneur. In this sense the level of analysis in this dissertation is both the individual level and the firm level as the performance indicators are objective firm level figures based on the income statement and balance sheet information.

1.4 Outline of the dissertation

This dissertation comprises two main parts Part I and Part II. Part I, an introductory part, includes five chapters. The first chapter above described the rationale, provided an overview of the research on EO accomplished so far, and pointed out the research gaps the dissertation at hand proposes to address. It also set out the objectives, defined the key concepts and presented an outline of the dissertation. Chapter 2 covers the relevant literature related to the concepts used in the articles. Chapter 3 gives a brief introduction to the research design of the dissertation, to the data and to the research methods used. Chapter 4 introduces the articles, describing the objectives and main findings of each. It also presents answers to the research questions. Finally, Chapter 5 presents the theoretical contributions of the dissertation and makes suggestions for further research. Part II of the dissertation consists of five research articles addressing the two sub-research questions. Figure 3 illustrates the outline of the dissertation.

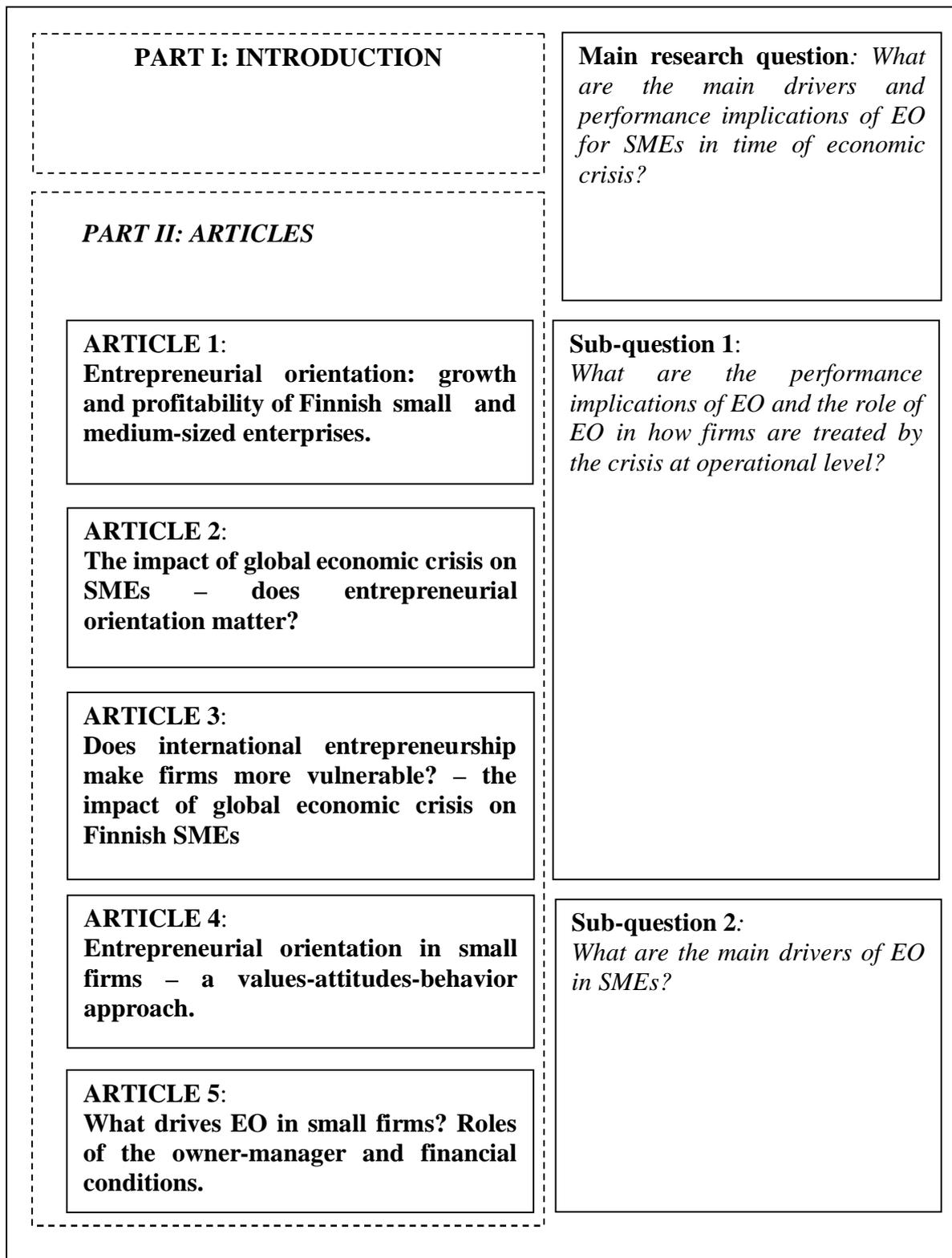


Figure 3. Outline of the dissertation

The first article takes a rather conventional approach to the topic offering a general understanding of the relationship between EO and firm performance among Finnish SMEs. An addition to this conventional approach a unique attempt was made to shed light on the relationship between the strategic construct and actual riskiness of the firm based on a risk measure derived from balance sheet figures. The second article takes a slightly more ambitious approach as here the EO is broken down into more detailed dimensions and, in addition to the traditional performance implications, the focus is on the operational effects of the economic crisis perceived by the managers. In the third article the focus is on how EO affects financial performance at different stages of the economic crisis and the role of the firm's level of internationalization. Articles four and five take a different approach from the three first papers. In these two papers EO is treated as a dependent variable and the purpose is to examine its determinants. The work related values of the entrepreneur are in a key position in these two papers. Paper four especially takes a rather ambitious and novel approach to the issue. Altogether these five research articles can be seen to give a fairly comprehensive picture of EO in SMEs.

2. THEORETICAL FRAMEWORK

In this chapter the key concepts of this dissertation are presented and the relevant literature related to them is also covered in relevant depth to highlight the acceptance and distribution of these concepts. First EO is discussed to give the reader an adequate understanding of the phenomenon and its implications mainly for firm performance. Thereafter the focus shifts to the literature related to the antecedents of entrepreneurship. Studies examining the possible determinants of entrepreneurship and entrepreneurial behavior are covered to reveal the logic and rationale behind the approach in this part of the dissertation.

2.1 The concept of entrepreneurial orientation

The phenomenon of EO has become a central focus of the entrepreneurship literature and the subject of more than three decades of research (Covin and Wales, 2012). EO is considered to be a higher order construct with underlying dimensions (George and Marino, 2011) and Miller (1983) conceptualized the three focal dimensions of EO as *innovativeness*, *risk-taking* and *proactiveness* and these three dimensions have since been used consistently in the literature (Kemelgor, 2002; Dimitratos *et al.*, 2004). Lumpkin and Dess (1996) described innovativeness as follows: Innovativeness reflects a firm's tendency to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products, services, or technological processes. Innovativeness represents a basic willingness to depart from existing technologies or practices and venture beyond the current state of the art. They argued that innovativeness is a key component of EO because it reflects important means by which firms pursue new opportunities. Strategic risk-taking means actions such as venturing into the unknown, heavy borrowing, and/or committing large portions of corporate assets in uncertain environments (Baird and Thomas, 1985). In the same manner, Lumpkin and Dess (1996) argued that entrepreneurially oriented firms are often characterized by risk-taking behavior, such as incurring heavy debts or making significant resource commitments, in the interests of obtaining high returns by seizing opportunities in the marketplace. Proactiveness was described by Miller (1983) as an opportunity-seeking, forward-looking perspective characterized by the introduction of new services and products ahead of the competition and acting in anticipation of future demand.

In addition to these three much used dimensions Lumpkin and Dess (1996) argued that dimensions such as *competitive aggressiveness* and *autonomy* should also be considered as essential components of EO. These two additional dimensions were defined by Lumpkin and Dess (2001) as follows: Competitive aggressiveness is said to reflect the intensity of a firm's effort to outperform industry rivals, characterized by a strong offensive posture and a forceful response to competitor's actions. Autonomy is independent action by an individual or team aimed at realizing a business concept or vision and carrying it through to completion. The number of studies in the EO literature using all these five dimensions is very limited (e.g. George *et al.*, 2001) when compared to the number of studies using the three dimensions of Covin and Slevin (1989). It is obvious that the dimension of autonomy is related to larger corporations and therefore, in the context of small firms especially, it can be reasonably omitted from the scale. The same exclusion procedure may also be relevant for competitive aggressiveness, as small firms may lack the competitive power needed to be able to behave as the dimension expects.

George and Marino (2011) stated that in spite of the wide acceptance of the construct a number of issues regarding dimensionality, the nature of the construct, interdependence of the dimensions etc. are worth mention. First, regarding the dimensionality issue Rauch *et al.* (2009) noted that the focal dimensions of EO are usually highly inter-correlated with each other, which leads to combining these dimensions into one single factor. In the EO literature there is no solid consensus on the dimensionality of the EO construct. On the one hand, scholars such as Covin and Slevin (1989) have argued that the EO construct is best viewed as a unidimensional concept and on the other hand Lumpkin and Dess (2001), for example, have suggested that the dimensions of EO may relate differently to firm performance. Dess *et al.* (2011) later mentioned that, if a highly inter-correlated EO scale (for instance the nine-item scale by Covin and Slevin (1989)) is split into separate dimensions, this kind of analysis would not adequately represent the construct of EO. On the other hand they still suggest running this kind of "supplementary analysis" to obtain additional insights.

Similarly, an issue related to the use of different numbers of dimensions is a topic worth discussing as there are two main schools of thought arguing how best to capture the EO,

Lumpkin's and Dess's (1996) five dimensions or Covin's and Slevin's (1989) three dimensions. Besides these two main contenders George and Marino (2011) noted that some scholars (e.g. Mertz and Sauber, 1995) have suggested that the right number of dimensions is even fewer than three. The comprehensive meta-analysis by Rauch *et al.* (2009) and also a work by George and Marino (2011) present an extensive listing of scholarly studies and the EO scales used in them and whether dimensions have been treated separately or not. The use of different items, different numbers of dimensions and different combinations of these has given rise to concern relating to construct validity, as Dess *et al.* (2011) noted a situation with too much variation in the definition and measurement of the key construct will cause difficulties when building on earlier findings.

Secondly, there is debate on the nature of the construct of EO and the relationship between EO and its dimensions a by definition EO is a higher-order construct implying that EO consists of structural relationships with other structures. A problem arises from the fact that in the case of the EO the definitions used in the literature have not been consistent in the relations between the dimensions and the superordinate construct, which has led to interpretations and disputes (George and Marino, 2011). Recently fundamental discussion has emerged in the literature on whether EO is a reflective or formative construct (Covin and Wales, 2012).

Figure 4 illustrates the difference between reflective (causality from the construct to what it measures) and formative (causality from the measures to the construct) constructs. If EO is considered a reflective construct it implies that an entrepreneurially oriented firm will exhibit characteristics of proactiveness, innovativeness and risk-taking and an increase in EO would be anticipated to increase the levels of each of these dimensions (George and Marino, 2011). On the other hand, in the case of the formative construct the process flows the opposite way, implying that EO is composed of its dimensions. That is, EO is formed by aggregations of the dimensions. George and Marino (2011) argued EO to be reflective construct, reasoning that empirical studies have consistently shown dimensions to covary implying that a change in EO causes changes in all its dimensions. Therefore they suggested that the dimensions are only reflections of the larger, unobservable construct representing a firm's strategic posture.

On the other hand, approaches to EO used by other scholars, for instance Lumpkin and Dess (2001), imply that the EO would be formative construct created by its dimensions.

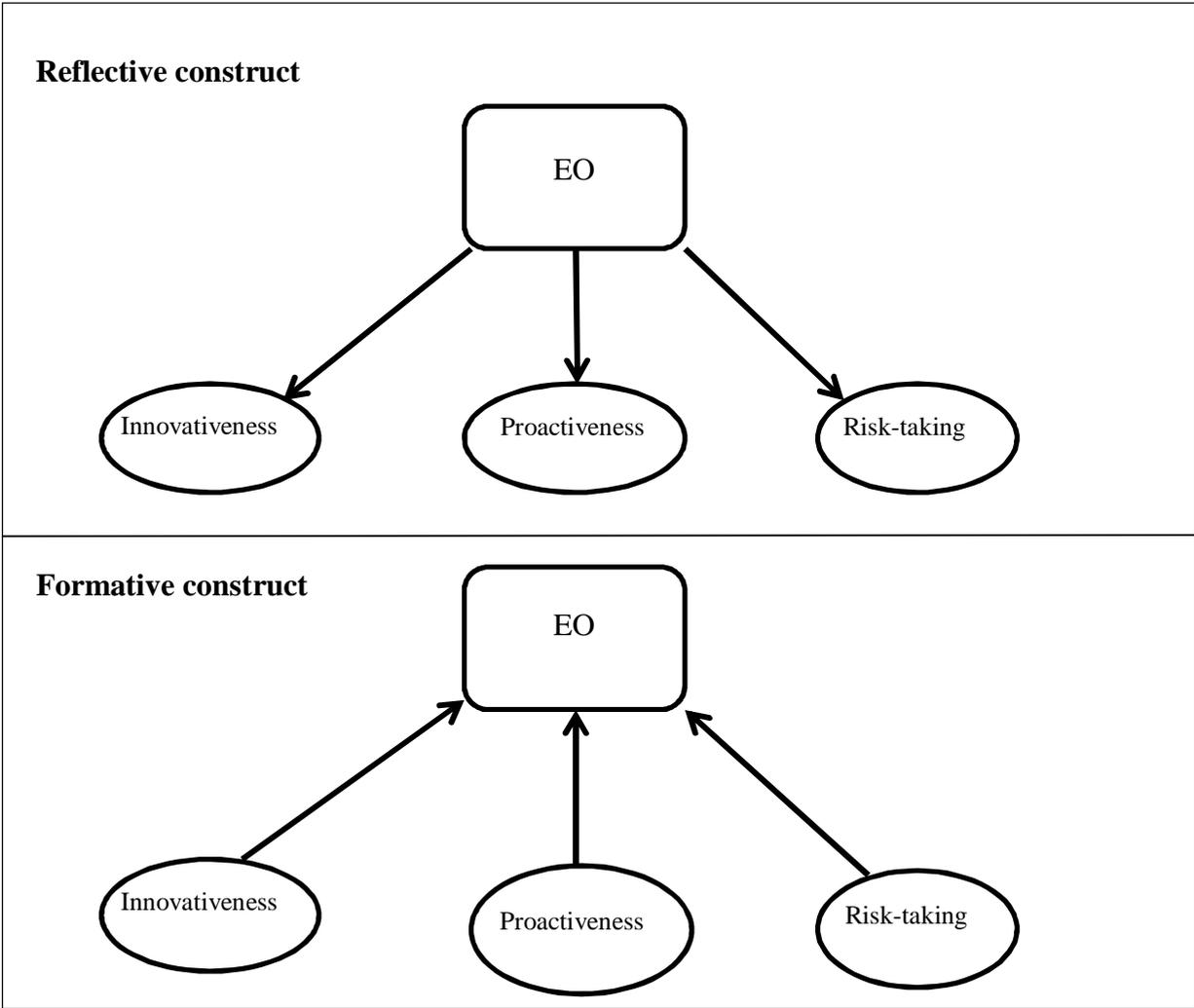


Figure 4. Reflective vs. formative construct

The lack of consensus on the directions of causality has many implications for several issues. For example, if the objective is to explain the level of EO, EO can be explained by some antecedents, or is the right way to seek antecedents for innovativeness, proactiveness and risk-taking? Similarly, if the purpose is to enhance the level of a firm’s EO is the right approach to be more innovative, proactive and risk-taking or is there something else that has to be done to be more entrepreneurial?

2.2 The EO-performance relationship

The modern business environment is considered to be highly dynamic; the life cycles of products and business models are shortened, the future profit streams from existing operations are uncertain, and businesses need to constantly monitor the environment for new opportunities. In such circumstances, adopting an entrepreneurially oriented posture may be beneficial for firms (Rauch *et al.*, 2009). The supportive impact of EO on performance is related to the first-mover advantages and the tendency to take advantage of emerging opportunities (Wiklund, 1999). Zahra and Covin (1995) argued that firms with EO are able to “skim” the markets ahead of their competitors by targeting premium market segments and charging high prices. Wiklund (1999) pointed out that entrepreneurially oriented firms monitor market changes and respond rapidly, thus seizing emerging opportunities. Innovation keeps them ahead of their competitors, gaining a competitive advantage that leads to improved financial results. Proactiveness gives firms the capability to launch new products or services on the market before their competitors, which also gives them a source of competitive advantage. Moreover, Wiklund (1999) argued that it is reasonable to assume that EO is even more beneficial in the context of small firms as the smallness *per se* may be conducive to flexibility and innovation.

2.2.1 Performance measures in EO literature

Financial performance is claimed to be a multidimensional construct, for instance Carton and Hofer (2006) described financial performance to be a combination of profitability, growth, efficiency, liquidity, size, and leverage, which are measured with relevant measures. The potential measures to assess the above-mentioned dimensions of performance are for instance: return on assets, sales growth, sales per employee, current ratio, number of employees, and debt to equity.

The concept of financial performance itself is a complex construct, and the EO literature offers no solid consensus on the appropriate measures of small firm performance (Wiklund, 1999). Hence the prior literature shows that the variety of measures that have been used to assess the firm performance has been rather diverse. For instance, Kraus *et al.* (2012) noted

that performance is regularly measured in one or a combination of the following means: perceived financial, perceived non-financial and archival financial.

Several studies (Dess *et al.*, 1997; Wiklund, 1999; Lumpkin and Dess, 2001; Wiklund and Shepherd, 2003; Madsen, 2007; Runyan *et al.*, 2008; Kraus *et al.*, 2012; Lechner and Gudmundsson, 2012; Messersmith and Wales, 2013) have used perceived performance indicators to assess firm performance. The items that were used to form the performance indicator typically based on manager's subjective views about firm's profitability, growth, market share, in relative to its most important competitors. The overall performance measure is typically formed by merging several items measuring the different aspects of performance into one performance score or index (e.g. Lechner and Gudmundsson, 2012). The reasons for the use of perceived performance measures are commonly the lack of publicly available archival performance figures on SMEs (Kraus *et al.*, 2012) or the fear of losing respondents if such accurate performance figures are requested in questionnaires as privately owned firms are often reluctant to disclose such financial information (Messersmith and Wales, 2013). This kind of subjective performance data may be prone to biases or inaccuracy as it relies on key informant's, typically CEO's, ability and willingness to report and rate firm's objective performance accurately with subjective proxies (Kraus *et al.*, 2012). Many studies on the other hand have shown that subjective and objective performance measures are typically strongly positively correlated (Wall *et al.*, 2004; Jantunen *et al.*, 2005; Stam and Elfring; 2008; Messersmith and Wales, 2013) and hence support the validity of the subjective performance measures.

The use of archival financial performance measures is significantly less frequent than the use of the above-mentioned subjective performance measures (e.g. Zahra and Covin, 1995; Zahra and Garvis, 2000; Covin *et al.*, 2006; Stam and Elfring, 2008; Zahra, 2008; Harms *et al.*, 2010; Cassia and Minola, 2012). Similarly, Rauch *et al.* (2009) reviewed 52 EO studies and found that performance was measured by archival financial measures in only seven studies. Also, among those studies using secondary data there is variation in how performance is defined and measured. Some scholars like Zahra and Covin (1995) combined measures of return on assets (ROA), return on sales (ROS) and growth into a single performance indicator, as they see performance as a multidimensional concept. Whereas some scholars (Moreno and

Casillas, 2008) argued that this kind of an approach may not be the most suitable because growth dimension and profitability dimension are sometimes contradictory and therefore should not be combined into one single indicator. Wiklund (1999) also pointed out that there is a common sentiment that growth is a more accurate performance indicator than accounting measures and hence superior to indicators of financial performance. For instance, Covin *et al.* (2006), Stam and Elfring (2008) and Moreno and Casillas (2008) used sales growth as performance indicator in their studies. Profitability measured by return on assets (ROA), has been used as an indicator for performance in studies by Zahra and Garvis (2000) and Zahra (2008).

Non-financial measures, such as satisfaction and global success ratings made by managers, can also be used in entrepreneurship research to assess the perceptions of the SME's management towards the performance of the firm because of a strong correlation between financial and non-financial measures (Covin, 1991). However, this kind of an approach has been used rather infrequently in the literature (Rauch *et al.*, 2009). Even apart from the traditional performance measures some EO studies have, for instance, used new product development, product innovativeness, and number of patents as dependent variables (Kemelgor, 2002; Avlonitis and Salavou, 2007; Friskhammar and Hörte, 2007).

2.2.2 *Empirical findings on EO-performance relationship*

As can be seen from the preceding section, in the EO literature the concept of performance is very complex as performance measures used in studies ranges in a very wide variety of measures. Therefore when the EO studies refer to "performance" at a more detailed level this may actually be profitability or growth or a combination of these. Moreno and Casillas (2008) pointed out that the quite extensive body of literature on the relationship between EO and firm performance is dominated by two types of studies. Firstly, there are those presenting general models describing the characteristics of the said relationship, identifying the moderating and mediating variables and striving to establish wide-ranging propositions (Covin and Slevin, 1991; Marino *et al.*, 2002; Stam and Elfring, 2008). Secondly, as Moreno and Casillas (2008) observed, a wide range of studies have attempted to empirically verify partial models of said relation. This field of research contains, in an isolated and independent manner, some of

moderating variables, those related either to environment (Tan and Tan, 2005) or to the firm's internal dimensions (Wang, 2008).

Several empirical studies have found that firms with high EO perform better than firms with lower levels of EO, for instance Keh *et al.* (2007) pointed out that EO has a crucial role in improving firm's perceived performance measured by benchmarking the respondent's own business performance against those of competitors based on profitability, sales growth, market share, and overall performance. Correspondingly, Wiklund and Shepherd (2003) likewise showed that there is a strong correlation (0.34) between the level of EO and performance. Here the performance measure was a subjective measure composed of ten different dimensions of performance: sales growth, revenue growth, growth in the number of employees, net profit margin, product/service innovation, process innovation, adoption of new technology, product/service quality, product/service variety, and customer satisfaction. The relationship between EO and performance has also been tested in specific industries. For instance, Kraus (2013) showed that within service firms EO is a highly significant predictor of company performance. As most of the earlier EO studies utilize cross-sectional data there are also some studies that focus on the relationship in a longitudinal framework. For instance, Wiklund (1999) pointed out that striving to increase EO may be worthwhile for small firms since a positive relationship was identified between EO and firm performance and furthermore the relationship was intensified over time.

As a notable amount of studies have shown that there is a direct relationship between EO and performance, there is also a number of studies that have shown that EO has no direct effect on performance. Zahra (2008) showed that EO had no direct effect on performance, but the interaction between market orientation and EO influenced performance positively. Moreover, this relationship was dependent on industries as the strength of the interaction effect was stronger in high-tech industries. The nature of the business environment can also play a role in the relationship between EO and performance. Kraus *et al.* (2012) is one of the first studies investigating the effects of EO on the performance of SMEs during the current global economic crisis. They showed that only being proactive made a significant direct positive contribution to performance. On the other hand, the interaction term of innovativeness with market turbulence was positively related to business performance, whereas the relationship

between the interaction term of risk-taking with market turbulence and business performance was negative. These findings led to the conclusion that under conditions of high uncertainty or market turbulence, investments in proactiveness and innovativeness and careful management of the firm's risk-taking activities would appear wise. Furthermore, Messersmith and Wales (2013) showed that there was no significant direct main effect of EO on young firms' sales growth, but there was an interaction effect between human resource management and EO on firm performance. This finding indicated that EO has a more positive relationship with sales growth among firms with higher scores of high-performance work systems (Messersmith and Wales, 2013).

There is also empirical evidence indicating that the relationship between EO and performance is not necessarily linear. For instance, even if entrepreneurship is one of the key elements in organizational success, Bhuian *et al.* (2005) showed that the relationship was inverted U shaped, implying that targeting higher and higher levels of EO is not the optimal goal in certain specific market and structural conditions. Tang *et al.* (2008) likewise reported a curvilinear relationship between EO and firm performance. Zahra and Garvis (2000) also noted that although firms that aggressively pursued EO in hostile international environments had higher levels of profitability (ROA), as the level of environmental hostility increased, the increase in the firm's entrepreneurial activities tended to lead to a situation which ROA fell. Hence, Zahra and Garvis (2000) concluded that also under excessively hostile environment the relationship between EO and profitability is not linear. These findings confirm that the pursuit of the highest possible EO may under some conditions lead to undesired end results.

Growth is one very commonly used tool for measuring the success and performance of firms (Lappalainen and Niskanen, 2009) and it is also argued to be the dominant goal of the entrepreneurial organization (Mintzberg, 1973). Lumpkin and Dess (1996) later noted that EO is, essentially, a growth orientation. Stewart and Roth (2001) likewise referred to entrepreneurial small business owners as growth oriented. However, despite these widely acknowledged facts, the relationship between EO and the growth dimension of firm performance has been studied remarkably little. Covin *et al.* (2006) argued that EO effectiveness is appropriately measured using criteria that reflect a firm's success at translating entrepreneurial opportunities into growth trajectories. In their study they used sales

growth rate as a growth proxy when exploring the relation between EO and growth. Their study showed that there is a positive relationship between EO and sales growth rate. Similarly, the findings of Harms *et al.* (2010) and Stam and Elfring (2008) emphasized the positive relationship between EO and sales growth and the findings of Eggers *et al.* (2013) evidenced the positive influence of EO on revenue growth and employment growth. Li *et al.* (2009) showed that when the growth was measured with subjective items there was also a strong positive correlation between firm growth and the components of EO. Nevertheless, the findings among studies are not consistent on the positive impact of EO on growth. For instance, Moreno and Casillas (2008) and Zahra and Garvis (2000) did not find a direct relationship between EO and firm growth to be significant. However, the results of Moreno and Casillas (2008) suggested that there is an indirect relationship via the mediating and moderating role of other variables such as strategy, environment, or resources of the firm. According to Moreno and Casillas (2008) these results underline the complexity of the relationship between EO and firm growth.

2.3 Drivers of entrepreneurial orientation

There is general agreement on the important role of entrepreneurship and it is often argued to be one of the key elements of economic growth, employment generation and productivity improvements (Grillo and Irigoyen, 2006; Liñán *et al.*, 2011). Given the important role of entrepreneurship, investigating its determinants has become a key research topic among many scholars (Masuda, 2006; Grilo and Thurik, 2008; Goethner *et al.*, 2012). Due to the multidimensional nature of entrepreneurship, a variety of approaches have been used to shed light on it. Freytag and Thurik (2007) state that the approaches used to explain the phenomenon of entrepreneurship have been built on many different disciplines such as economics, sociology, and psychology. Hence many different perspectives, approaches, and tools are needed to better understand the relevant factors enhancing entrepreneurial activity at all levels of observation where the phenomenon is present, such as individuals, firms, regions or industries and even nations (Freytag and Thurik, 2007).

2.3.1 *Antecedents of entrepreneurial orientation*

As mentioned earlier, the amount of EO literature using the construct as a dependent variable instead of an independent variable is quite limited. After an extensive search in ABI/INFORM Global and EBSCO -Academic Search Elite databases using the key words “entrepreneurial orientation” and “antecedent” or “determinant” or “predictor” for studies directly stating that the aim (or one of them) was to explain EO, it was possible to find a handful of empirical scholarly articles. Table 1 presents the publications, the variables used in explaining EO, the context of the study and the main factors found to significantly affect the level of EO. Studies focusing only on explaining EO and not treating it as a mediating variable are marked with an asterisk in Table 1 the total number of such studies is nine.

The years of publications alone suggest that the theme is gaining in popularity, as ten out of 15 studies were published in 2010 or later. On the other hand, the increase in the number of studies could also indicate the previously mentioned possible saturation of the field of traditional EO-performance studies, forcing authors to take novel approaches in the EO framework.

Scrutiny of the explanatory variables used in earlier studies revealed that the variables can be roughly divided into four broad categories: i.e. demographic, organizational, environmental, and psychological. The context of the studies is mainly traditional SMEs, but three of the studies (Morris *et al.*, 2007; Wood *et al.*, 2008; Meynhardt and Diefenbach, 2012) focus on EO in rather uncommon contexts such as non-profit organizations, Air Force organizations and one particular governmental agency.

Table 1. Summary of studies treating EO as dependent variable

Publication	Explanatory variables	Context	Main findings: factors found to explain EO
Entrialgo <i>et al.</i> (2001)*	-Organizational context of the firm	- Spanish SMEs	- Resources - Competitive strategy
Salvato (2004)*	- Individual CEO characteristic - Family firm issues - Ownership structure - Organizational characteristics	- Swedish family SMEs	- CEO leadership experience - Ownership structure - Value based compensation
Sciascia <i>et al.</i> (2006)*	- Environment-related factors - Organization-related factors - Individual-related factors - Market orientation - Resources	- Swedish SMEs	- CEO experience (negative effect) - CEO education - Organizational informalization - Value-based compensation - Environmental dynamism and heterogeneity - Market orientation - Resources
Morris <i>et al.</i> (2007)	- Organizational structure - Leadership style - Organizational control systems - Environmental turbulence	- Non-profit organizations	- Transformational and transactional leadership - Discretionary control - Board structure
Wood <i>et al.</i> (2008)	- Appropriate use of rewards - Management support - Resource availability - Supportive organizational structure - Risk-taking and failure tolerance	- Air Force Organizations in US	- Appropriate use of rewards - Management support - Supportive organizational structure - Risk-taking and failure tolerance
Okhomina (2010)*	- Need for achievement - Internal locus of control - Tolerance for ambiguity - Supportive environment	- Used auto dealers in the U. S.	- Need for achievement - Internal locus of control - Tolerance for ambiguity - Supportive environment
Peters <i>et al.</i> (2010)*	- Employee orientation - Brand orientation	- Tyrolean hotel industry	- Employee orientation - Brand orientation
Altinay and Wang (2011)*	- Socio-cultural characteristics	- Small firms in London	- Educational attainment of entrepreneur - Previous experience of the owner
Yaghoubi and Naroei (2011)*	- Emotional intelligence - Organizational intelligence	- Industry (not reported in more details)	- Emotional intelligence - Organizational intelligence

Table 1. Continued

Ullah <i>et al.</i> (2011)*	- Birth order - Family occupation - Motivational factors	- Pakistani SMEs	- Being the first child, especially a son - Having an entrepreneur in family - Motivations related to the exploitation of an economic opportunity
Qureshi and Kratzer (2011)	- Environmental turbulence	- Small technology-based firms in Germany	- Environmental turbulence
Zainol and Ayadurai (2011)	- Personality traits	- Malay family firms in Malaysia	- None
Jalali (2012)	- Environmental dynamics - Environmental hostility - Environmental uncertainty	- Iranian SMEs which target Eastern European countries	- Environmental dynamics - Environmental hostility - Environmental uncertainty
Meynhardt and Diefenbach (2012)*	- Management support - Work discretion - Rewards - Resource availability	- Germany's Federal Labor Agency	- Influence of management support - Work discretion - Position/ departmental tenure
Eggers <i>et al.</i> (2013)	- Financial resources - Technological changes	- Austrian SMEs	- Availability of financial resources - Technological changes

The main findings of the studies indicated that the factors explaining EO can indeed be divided into the abovementioned categories. Demographic variables such as the experience or education of the CEO (Salvato, 2004; Sciascia *et al.*, 2006; Altinay and Wang, 2011), family related factors (Ullah *et al.*, 2011) were found to have a positive effect on the level of EO. At the organizational level factors related to the structure of the organization, management support, resources, appropriate use of rewards or leadership styles (Entrialgo *et al.*, 2001; Sciascia *et al.*, 2006; Morris *et al.*, 2007; Wood *et al.*, 2008; Meynhardt and Diefenbach, 2012) were found to have a positive effect on EO. Studies examining the effects of the environment (Sciascia *et al.*, 2006; Qureshi and Kratzer, 2011; Jalali, 2012; Eggers *et al.*, 2013) showed consistently that the turbulent and dynamic environments tend to affect the level EO. This confirms the important role of the environmental context in EO research in a similar manner than e.g. Covin and Slevin (1991).

An interesting approach potentially especially relevant in the context of small firms where the entrepreneur is in a significant role is taken in the studies by Okhomina (2010) and partly Ullah *et al.* (2011) as they focus on psychological traits and motivations explaining EO. This approach demonstrates that these kinds of personality related factors significantly influence entrepreneurial behavior and hence may also have an indirect effect on firm performance.

Another noteworthy issue is the financial resource availability issue pointed out in a few studies (e.g. Entrialgo *et al.*, 2001; Salvato, 2004; Meynhardt and Diefenbach, 2012; Eggers *et al.*, 2013). The relationship between financial resources and EO is an important topic for further research as the findings may have important practical and policy implications when considering general means to support entrepreneurship. As the summary showed, the empirical evidence regarding the drivers of EO is still meager, which justifies broadening the scope of the examination of the literature to include a rather more general level of entrepreneurship literature to obtain a better impression of factors affecting entrepreneurship.

2.3.2 *Individual level entrepreneurship*

Although the phenomenon of entrepreneurship exists at various levels of observations, we focus here on entrepreneurship at the individual level. Therefore, so as not to exceed the scope of this dissertation, the examination of the literature must be confined mainly to studies on the determinants of individual level entrepreneurship.

Given the very nature of entrepreneurship, the angles from it has been approached in the literature are multiple. The issues related to defining the concept of entrepreneurship likewise give rise to variation in the ways entrepreneurship is measured i.e. the proxies for entrepreneurship form a large group of variables.

The proxies for the level of entrepreneurship which have been used in the literature have typically included entry rate as measured by the number of new start-up business incorporations and small firm birthrate, as measured by the registration of a firm (Reynolds *et al.*, 1994) or self-employment rates (Parker and Robson, 2004). Less objective measures derived from survey questionnaires or interviews have also been used as proxies for entrepreneurship. For example, the probability of being self-employed (Cowling, 2000),

entrepreneurial spirit i.e. preferences for self-employment (Blanchflower *et al.*, 2001; Masuda, 2006), involvement in entrepreneurship (Grilo and Thurik, 2008), entrepreneurial intentions i.e. intentions to act entrepreneurially within existing small and newly established companies (Gird and Bagraim, 2008; Liñán *et al.*, 2011; Goethner *et al.*, 2012) and EO (Salvato, 2004) have been utilized in studies focusing on the determinants of entrepreneurship.

Given the usefulness of understanding the factors driving entrepreneurial activities, scholars have tried to explain the determinants of entrepreneurship for the past three decades (Salvato, 2004). A one common approach to explaining entrepreneurship has been to use general demographic variables such as level of education, age, gender, wealth or parent's occupations as possible determinants. For instance, Blanchflower and Oswald (1998) showed with data from the UK that family's wealth or sudden increase in wealth (through inheritance or gifts) tend to increase a person's entrepreneurial spirit. The findings of Masuda (2006) and Eggers *et al.* (2013) emphasized the significant role of capital. In line with Blanchflower and Oswald (1998) Masuda found that wealth or access to capital enhances entrepreneurial spirit, and Eggers *et al.* (2013) showed that EO was positively influenced by the availability of financial resources.

The role of family also seemed to have an effect on the level of entrepreneurship, as according to Blanchflower and Oswald (1998) and Liñán *et al.* (2011) the presence of other entrepreneurs in the family tended to have a positive effect on the level of entrepreneurial intentions.

Gender has also been found to influence the level of entrepreneurial spirit or engagement. Several studies (Blanchflower and Oswald, 1998; Cowling, 2000; Lin *et al.*, 2000; Davidsson, 2006; Grilo and Thurik, 2008; Berglann *et al.*, 2011) have shown that females typically exhibit lower levels of entrepreneurship than men. On the other hand the results related to gender are somewhat inconsistent, as Masuda (2006) showed with Japanese data that female dummy had a positive effect on the entrepreneurship.

Cowling (2000) pointed out that age and education have also been consistently identified as key determinants of entrepreneurial spirit. Masuda (2006) likewise showed that entrepreneurial spirit was highest among 25-29 year-old people and being a college or university graduate tended to raise the level of entrepreneurship. The findings of both Cowling (2000) and Grilo and Thurik (2008) also emphasize the role of education as a significant determinant of entrepreneurship. On the other hand the relationship between level of education and entrepreneurship might be inverse-U shaped, as Berglann *et al.* (2011) showed that scientists with a PhD are among the least entrepreneurial of all education groups.

Despite a lack of consensus on many aspects of entrepreneurship, Grilo and Thurik (2008) noted that on one thing scholars tend to agree: the level of entrepreneurial activity varies systemically across countries or regions (Cowling, 2000; Blanchflower *et al.*, 2001; Grilo and Irigoyen, 2006; Minniti and Naudé, 2010). These country or region specific differences can be traced to differences in factors such as differences in labor market legislation, social security regimes, tax environment, economic growth, income level, unemployment rate etc. (Reynolds *et al.*, 1994; Grilo and Irigoyen, 2006; Lasch *et al.*, 2007) or to intrinsic cultural differences. These cognitive approaches especially have recently attracted considerable interest (Liñán *et al.*, 2011).

The variation in the level of entrepreneurship has led many scholars to examine the cultural, social and psychological factors which may be its determinants. Furthermore, there has recently been re-emergence of interest in personality factors in entrepreneurship research and a direct call for a psychological approach (Pines *et al.*, 2012). Several studies have demonstrated that cultural factors such as values, beliefs, and attitudes influence a wide range of behaviors, including the level of entrepreneurship (Thomas and Mueller, 2000; Freytag and Thurik, 2007). For instance, Kets de Vries (1977) argued that value systems contribute to entrepreneurship. Morris *et al.* (1994) showed that high levels of entrepreneurship can be explained by such cultural values as freedom, independence, self-sufficiency, individualism, achievement, and materialism. In a similar manner Davidsson and Wiklund (1997) showed that prevailing values can be considered important determinants of the level of entrepreneurship.

Therefore, based on the findings in the literature that values can be deemed determinants of the level of entrepreneurship, and, moreover, as Uy (2011) stated that personal values are at the very core of the diverse world of human behavior and every decision and action is a manifestation of those values it is justifiable to further explore the relationship between personal values and the level of entrepreneurship. Given the plethora of different values in the literature, the focus of this dissertation is on work related values, since it is reasonable to assume that the entrepreneur's behavior is a reflection of the factors he values the most.

2.3.3 *Organizational characteristics*

Studies explaining EO by organizational characteristics have shown that the structure of the organization, management styles, compensation mechanisms, etc. may have an effect on the level of EO (Salvato, 2004; Morris *et al.*, 2007; Meynhardt and Diefenbach, 2012). But on the other hand, when the focus is on EO in very small firms where the organizational structure is typically very low, the most relevant organizational characteristic explaining the level of EO may be the firm's financial resource base. Eggers *et al.* (2013) showed that in the case of Austrian SMEs the availability of financial resources had a positive impact on EO and on a more general level Blanchflower *et al.* (2001) and Masuda (2006) showed that wealth or access to finance tend to increase the entrepreneurial spirit. Therefore it is relevant to discuss the role of finance behind the EO.

Reviewing the definitions relating to innovativeness and risk-taking, it is easy to notice that R&D and new technologies are closely related to innovativeness whereas heavy borrowing, and/or committing large portions of corporate assets are related to risk-taking. As these abovementioned actions presuppose liquidity or financial slack in the form of cash or the ability to borrow it, it seems plausible that a firm's financial resources and profile may support EO.

The relationship between liquidity and entrepreneurial action is not clear as there are different views on this in the literature. Scholars like Penrose (1959) argued that slack enables management to act entrepreneurially and seize the perceived growth opportunities. Slack

resources are also seen to support organizational innovation. According to this view financial slack could play a positive role behind EO.

Another view is that high liquidity has a negative effect on management's willingness to act entrepreneurially. According to Bradley *et al.* (2011) "resource slack entices managers to be administrative rather than entrepreneurial in their management approach.". In a similar manner a substantial resource base may cause risk aversion among managers as they try to safeguard their present positions. This view is also shared by George (2005), who argued that a significant financial resource base may decrease managers' willingness to exploit new entrepreneurial opportunities. To highlight the negative role of financial resources Bradley *et al.* (2011) stated that the most recent research has recognized that resource constraints can trigger entrepreneurial behaviors. One aspect related to financial slack was the ability to borrow, although firm may be able to borrow funds management may be reluctant to do so. This is known as a conservative financial management or policy, which can be defined as a policy of low leverage implying that managers prefer to keep debt ratios low for the sake of risk reduction (Marchina and Mura, 2010). Conservative financial management has been noted to be an important issue especially in the small-firm context (Covin and Slevin, 1989) and moreover Miller (2011) mentioned the possible limiting role of conservative financial structures on EO and what types of financial structures support it. Therefore it is appropriate to include the role of a firm's financial characteristics in the context when examining the antecedents of EO.

2.3.4 *Work values*

Owners of small businesses have a strong influence on the firm's strategy, actions, and responses to changes in the surrounding business environment. This central role of the owner-manager has been recognized in the small business and entrepreneurship literature, and empirical evidence also suggests that entrepreneurs are a heterogeneous group of individuals in terms of professional expectations or values. Scholars have noted that human values are at the very heart of the complex world of human behavior and every decision and action is a manifestation of those values (Warr, 2008; Gahan and Abeysekera, 2009; Kaasa, 2011; Uy, 2011). Similarly, according to Gahan and Abeysekera (2009), it has been shown that among

the many types of life values, work values are considered to be significant determinants of individuals' work-related behaviors. Hence the work values of the entrepreneur are most likely to be key determinants of entrepreneurially oriented behavior.

Ros *et al.* (1999) argued that work values are a specific expression of general values in the work setting and refer to what a person in general wants out of work. Both Ros *et al.* (1999) and Lyons *et al.* (2006) defined work values as generalized beliefs about the desirability of certain attributes of work or behavior (e.g. working with other people) and work-related outcomes or end-states (e.g. high pay). Work values have been found to be relatively stable and enduring over time (Rokeach, 1973; Meglino and Ravlin, 1998). They are hierarchically ordered in the individual's mind (Lyons *et al.*, 2010) and underlie people's ideas of what is important to them when making important work-related decisions (Ros *et al.*, 1999).

Despite a plethora of different labels, definitions, and work value typologies, there appears to be a consensus on at least two or three fundamental types of values (Ros *et al.*, 1999; Kaasa, 2011). A trichotomous classification of values was introduced by Elizur (1984) and according to this values can be divided into the following types of work values: (1) intrinsic or self-actualization values, (2) extrinsic or security or material values, (3) social or relational values.

The intrinsic values pertain to the inherent psychological satisfactions of work such as interest, responsibility, challenge, variety, self-development or intellectual stimulation. Secondly, extrinsic values are related to high income, material possessions, benefits such as generous holidays, job security and comfort through good working conditions (e.g. Elizur, 1984; Vinken, 2007; Lyons *et al.*, 2010). Third, social values are related to affective interpersonal relations: belonging, acceptance, a fair supervisor (Kaasa, 2011). Ros *et al.* (1999) argued that there should also be a fourth distinctive type of values and they suggested that the fourth type of values, namely status or prestige values, should be concerned with power, achievement, advancement of status and recognition.

In the entrepreneurship and small business literature studies explicitly measuring work values are mostly limited to using work values as a predictor of career choice. If we look at some studies focusing on the work values of business founders versus those embarking on other

careers, the results reveal that typically business founders exhibited higher levels of intrinsic work values (Fagenson, 1993). These findings could imply a positive relationship between intrinsic work values and the level of entrepreneurship. This issue needs further investigation with more precise proxies for entrepreneurship. Furthermore, some studies have shown that strategic business choices regarding issues such growth or adaptivity vs. rigidity, reflect the work values of managers (Smith and Miner, 1983; Lafuente and Salas, 1989; Singh, 1989).

3. RESEARCH DESIGN AND METHODS

3.1 Overview of the research design

This dissertation includes five separate articles. Each of these focuses on the main themes of the dissertation from different aspects. Table 2 summarizes the datasets, sources and research methods of this dissertation.

Table 2. Research design

<i>Article</i>	<i>Data</i>	<i>Analysis methods</i>
1. Entrepreneurial orientation: growth and profitability of Finnish small and medium-sized enterprises	Cross-sectional survey data from 2009, number of respondents 194, response rate 19%. Income statement and balance sheet data between 2004 and 2007, obtained from commercial database Voitto+.	Principal component analysis, linear regression analysis and two-way analysis of variance.
2. The impact of global economic crisis on SMEs – does entrepreneurial orientation matter?	Cross-sectional survey data from 2009, number of respondents 194, response rate 19%. Income statement and balance sheet data between 2004 and 2009, obtained from commercial database Voitto+.	Principal component analysis and linear regression analysis.
3. Does international entrepreneurship make firms more vulnerable? – the impact of global economic crisis on Finnish SMEs	Cross-sectional survey data from 2008, number of respondents 255, response rate 22% and cross-sectional survey data from 2009, number of respondents 194, response rate 19%. Income statement and balance sheet data between 2006 and 2010, obtained from commercial databases Voitto+ and Amadeus.	Principal component analysis and linear regression analysis.
4. Entrepreneurial orientation in small firms – values-attitudes-behavior approach	Cross-sectional survey data from 2009, number of respondents 194, response rate 19%. Income statement and balance sheet data between 2005 and 2009, obtained from commercial database Voitto+.	Structural equation modeling with partial least squares approach.
5. What drives EO in small firms? Roles of the owner-manager and financial conditions	Cross-sectional survey data from 2009, number of respondents 194, response rate 19%. Income statement and balance sheet data from 2009, obtained from commercial database Voitto+.	Principal component analysis and linear regression analysis.

3.2 Data collection and methods of analysis

The survey data used in all five articles was collected during spring 2009 by means of a pre-tested structured survey questionnaire. The questionnaire contained items related to a fairly wide variety of themes from legal environment to entrepreneurship and the effects of the recent global downturn. The results of this survey related to other themes than those addressed here were utilized in other doctoral theses. The questionnaires and cover letter, including an assurance of the confidentiality of the survey, were mailed to 1,026 randomly selected firms with annual sales turnover between 1 and 10 million Euros. As prior research considers CEOs and founders the “single most knowledgeable and valid information sources” (Lechner *et al.*, 2006, p. 525), the questionnaires were addressed directly either to the owner-manager or to the CEO of the firm, following a key-informant approach. Two weeks after the first mailing round we sent reminder letters to firms which had not yet responded. After these two mailing rounds we received responses from 193 firms, yielding a satisfactory response rate of 19% (193/1,026). It was possible to connect the financial statements of the respondents with the survey results yielding a large dataset containing the subjective responses from the owners or CEOs and objective income and balance sheet based figures, hence we had at our disposal a many sided and unique dataset.

Table 3 presents basic descriptive statistics (means, standard deviations, minimum and maximum values) of the firms in our dataset. The firms were mainly in the mature stage as the average age was 20 years and the youngest firms were also four years old, hence our sample does not contain firms in the most critical stage of the lifecycle. The firms are small both in terms of sales and number of employees as, for instance, the average annual sales is around two and a half million Euros. One interesting pattern is clearly visible in the profitability figures as there are remarkable decreases from 2007 to 2009, hence the effect of the economic crisis is clearly visible in our sample. The average EO was slightly above the value of three (out of five) and there also seems to be deviation in the level of EO among Finnish SMEs. Averages of work related values reveal that in their work the entrepreneurs value most highly those aspects which give them psychological satisfaction. Almost as important as the immaterial gains from the work seems to be the material aspect. Extrinsic values scored nearly as high as the intrinsic values, suggesting that the benefit, salary, and job security are also very important to the entrepreneurs. Moreover, the social relationships etc. and status and

power seem to be collectively clearly less important factors among the things the work offers the entrepreneurs. One conclusion could be drawn from this pattern of how the values divided into two separate groups. It seems that the entrepreneurs in SMEs are really doing their jobs for themselves, as they do not attach much importance to having either power of influence over other people, public acknowledgement or social relationships with other people.

Table 3. Descriptive statistics

Variable	Mean	Std. dev.	Min	Max
Firm age	20.00	12.00	4.00	107.00
Sales (million €), avg. 2005-2009	2.48	1.84	0.4	9.79
Number of employees 2009	17.98	20.91	1.00	150.00
Return on total assets 2009 (%)	8.94	18.14	-83.72	59.21
Return on total assets 2008 (%)	15.13	15.69	-36.00	71.46
Return on total assets 2007 (%)	19.63	13.54	-2.83	64.84
EO	3.32	0.69	1.44	4.89
Extrinsic work values	4.01	0.76	2.00	5.00
Intrinsic work values	4.24	0.53	2.40	5.00
Status work values	3.34	0.83	1.00	5.00
Social work values	3.11	0.84	1.25	5.00

Regarding the methods of analysis this dissertation mainly relied on principal component analysis, multiple linear regression analysis and structural equation modeling with the partial least squares (PLS) approach using SmartPLS 2.0 software (Ringle *et al.*, 2005). Following are brief and simple descriptions of each of the methods utilized.

Hair *et al.* (1998) described principal component analysis as a statistical approach that can be used to analyze interrelationships between a large number of variables and to explain these variables in terms of their common underlying dimensions. The objective is to find a way of condensing the information contained in a number of original variables into a smaller set of variables with a minimum loss of information. By providing an empirical estimate of the structure of the variables considered principal component analysis is a highly appropriate method for creating summated scales to represent latent constructs such as EO.

Linear regression analysis according to Hair *et al.* (1998) is the appropriate method of analysis when a single metric dependent variable is presumed to be related to metric independent variable(s). The objective of this method is to predict the changes in the dependent variable in response to changes in the independent variable. Thus it is a suitable technique, for instance, when the aim is to study the relationship between EO and profitability or growth.

Structural equation modeling is a technique that allows separate relationships for each of a set of dependent variables. It is the most appropriate and most efficient estimation technique for a series of separate multiple regression equations estimated simultaneously and allows several variables to be used for a single independent or dependent variable (Hair *et al.*, 1998). PLS is an appropriate structural equation modeling method in the context of this dissertation since PLS has the ability to produce more stable estimators than covariance-based structural equation modeling with small sample sizes and it is also able to work with indicators that do not follow the normal distribution (Harms *et al.*, 2010).

3.3 Measures used in the dissertation

The measures related to the main themes of this dissertation are widely used and well established in the literature. All the key items used here are listed in the Table 4 and discussed below. The roots of EO are in the early 1980's, when Miller and Friesen (1982) developed a scale to measure levels of EO, the attributes that are now, 30 years later, used for measuring EO are generally based on Miller's and Friesen's scale refined by Covin and Slevin (1989). We utilized these nine items to capture the three dimensions of EO. However, the items in this dissertation were adapted slightly to be more appropriate to the context of small enterprises in Finland. Knight (1997) has shown that this scale performs well in terms of both reliability and validity and also possesses a unique factor structure when tested in multilingual settings. It is therefore suitable for measuring the construct of entrepreneurship in different countries although it originated in the U.S.

In this dissertation the work values were measured on a scale adapted from three very similar scales used by Lyons *et al.* (2006), Lafuente and Salas (1989), and Elizur (1984). The measure included 19 items capturing the characteristics of intrinsic work values, extrinsic work values, status work values and social work values. All items were assessed on a five-point Likert scale with the anchors 1 = not at all important, 5 = of utmost importance.

Table 4. The key items used in the dissertation

CONSTRUCT	DIMENSION	ITEM
EO	Innovativeness	In our company, new ideas come up all the time.
	Innovativeness	Continuous renewal and innovation are important for our company
	Innovativeness	Lately we have launched many new products/ services.
	Innovativeness	We invest heavily in developing new products, services and business practices.
	Proactiveness	Our company often acts before the competitors do.
	Proactiveness	We aim at being at the forefront of development in our business sector.
	Risk-taking	We prefer the cautious line of action even if some opportunity might be lost that way. (Reversed)
	Risk-taking	Bold action is necessary to achieve our company's objectives.
	Risk-taking	In uncertain situations we are not afraid to take substantial risks. (Covin and Slevin, 1989)
Work values	Extrinsic	I can get a secure income from the business
	Extrinsic	I can get a sufficient monetary reward for my work
	Extrinsic	I can obtain wealth through the business
	Intrinsic	The work offers challenges where I can apply my skills
	Intrinsic	The work is inspiring
	Intrinsic	I can learn or create something new
	Intrinsic	I can affect the organization's success
	Intrinsic	I can enjoy my work
	Status	I can manage and organize other people's work
	Status	The work is respected by others
	Status	I can advance in my career
	Social	I can work in a business owned by my family
	Social	The work has an impact on the society
	Social	I can offer employment to others
	Social	I can leave a solid business to the next owner generation (Elizur, 1984; Lafuente and Salas, 1989; Lyons <i>et al.</i> , 2006)

Table 4. Continued

CONSTRUCT	DIMENSION	ITEM
Effects of Economic Downturn		<p>The downturn has decreased our sales</p> <p>The downturn has decreased our profitability</p> <p>The crisis makes our operations harder overall</p> <p>Customers have canceled their orders</p> <p>We have not been able to pay dividends</p> <p>We have cut down the principal owner's salary</p> <p>It has been hard to get financing</p> <p>Lack of financing jeopardizes our future</p> <p>The crisis increases the risk of bankruptcy</p> <p>We have canceled investments due to lack of financing</p> <p>We have delayed our investments</p> <p>Our interest margin has been raised</p> <p>We have dismissed personnel</p> <p>We have laid off personnel</p> <p>We have outsourced our operations</p> <p>We've had to lower prices</p> <p>Competition has become more aggressive</p> <p>Our customers' terms of payment have become longer</p> <p>Our credit losses have increased</p> <p>Our suppliers have tightened their payment terms</p> <p>(Geroski and Gregg, 1993)</p>

The items measuring the effect of the economic crisis on firm's operational level were adapted from the scales used by Geroski and Gregg (1993). Their survey contained 32 detailed questions. The questions were divided into three main sections: "effects of the recession", "human resource management" and "company organization". The aim was to ascertain how severely the firms were affected by the recession; how much the recession

affected their trading position, pay arrangements, their workforce composition and their potential for financing (credit limits by banks). In our questionnaire some of the original items were omitted as they were not deemed suitable for small Finnish firms. The final measure included 20 items all assessed on a five-point Likert scale with the anchors 1 = totally disagree, 5 = totally agree

The annual balance sheets and income statements were obtained from commercial databases namely Amadeus and Voitto+. This information was used for calculating measures of financial performance. Several different financial performance measures are included in the analysis representing sales growth, size of the firm (total assets, turnover, number of employees), liquidity (quick ratio, current ratio), profitability (return on assets, profit margin), risk level etc. Most of the performance measures above are frequently used in the EO literature as discussed earlier, and therefore their use in this dissertation is justified to obtain comparable results. Liquidity is not used as a performance measure so often, but as Carton and Hofer (2006) stated, it is also an appropriate measure of performance as it refers to the ability of a firm to meet its financial obligations in a timely manner. Moreover, they remarked that liquidity measures represent only one of the dimensions of the performance and therefore are not alone sufficient to represent the construct of performance. Carton and Hofer (2006, p.72) also noted that “the critical performance issue relative to liquidity is whether the organization has or is developing enough readily accessible capital to continue to operate.” In this light it seems that the liquidity dimensions of performance are especially relevant during economically turbulent times, when the income flows are decreasing but still the most significant costs such as labor costs, rents or interests are harder or slower to cut down. Moreover, Lugovskaya (2010) showed that, especially in the case of SMEs, liquidity is a very important factor as gaps in cash flows can make it particularly vulnerable.

3.4 Issues related to surveys

Although in many cases survey questionnaires are the only way to obtain the desired data on a larger scale there are also some issues and biases related to the technique which should be acknowledged. Generally, it is assumed that when people fill out a survey questionnaire, their answers are based on the substantive meaning of the items to which they respond. However, it

has been known for a long time that people's answers are also influenced by content irrelevant factors (Baumgartner and Steenkamp, 2001). This means that all inventories and questionnaires are prone to possible distortion of the data. This problem is due to an individual's particular pattern of responding to the items. Such behavior patterns are of two general types: response styles and response sets. The response style means that the individual tends to select disproportionately a particular response category regardless of item content. Whereas response sets mean that the individual responds to item content in such a way as to portray himself in other than a true light (e.g. social desirability) (O'Neill, 1967). For instance, in the case of EO one manager may respond to the questionnaire items with the firm's desired strategies, while another may use its emergent strategies (Dess *et al.*, 2011).

We also conducted a test for non-response bias by comparing the early (first-round) respondents with the late responders (second-round) on the assumption that there were no differences between early and late responders (Armstrong and Overton, 1977). No significant differences were found between these groups in the distributions of the sum variables. Another test for the representativeness of our data was the comparison of responding and non-responding firms in terms of size; the information was retrieved from the Voitto+ database for the full sample of 1,026 firms. The size distributions of non-responding and responding firms turned out similar ($\text{Chi}^2=1.62$).

The utilization of self-reported data from a single informant may entail a risk of common method bias (Podsakoff *et al.*, 2003). However, the owner-manager is considered to have the best information about the strategic vision and managerial practices, which would be very hard to measure without some degree of subjectivity. The measurement of work values especially necessitates subjective evaluation and reporting. Furthermore, entrepreneurship scholars frequently use self-reports which have also been shown to be reliable (Chaganti *et al.*, 2002).

4. SUMMARY OF THE ARTICLES AND RESULTS

This chapter introduces the articles composing Part II of the dissertation. The articles, their overall objectives and main findings are introduced in a condensed manner.

The overall objective of this dissertation is, on the one hand, to explore the implications of EO for a firm's performance and coping with harsh economic conditions and, on the other hand, to examine which entrepreneur and firm specific factors may be the antecedents of EO. The first three articles focus on the performance implications of EO and the last two take EO as dependent variable. The articles are now presented in the order of appearance: Article 1 starts by examining how EO affects a firm's profitability, growth, and risk level. Article 2 then expands the examination of the performance implications of EO by examining at operational level the role of EO and the impact of the economic crisis on SMEs. Article 3 concentrates on the dimensions of EO and on the firm's degree of internationalization and moreover examines how these factors affect a firm's financial performance during a period of recession. Article 4 utilizes the value-attitudes-behavior framework to investigate the relationship between an entrepreneur's work-related values and entrepreneurially oriented behavior. Finally, Article 5 continues with this same theme but adds firm specific financial conditions and the experience of the entrepreneur into the analysis when examining the antecedents of EO.

4.1 Entrepreneurial Orientation: Growth and Profitability of Finnish Small and Medium-Sized Enterprises

4.1.1 Overall objective

The purpose of the Article 1 was to examine the relationship between EO and firm performance. In this article we tested whether the EO has a positive influence on firm's profitability and growth. Second, in this article it was investigated how the different dimensions of EO are related to firm's level of actual riskiness measured by financial statement based figures. The context of economic crisis was not yet present in this study as the latest financial statement was from the year 2007.

4.1.2 *Main findings*

As analysis method linear regression analysis was used and one of the independent variables was EO variable. The findings of this article showed that the EO does not have an impact on firm's profitability measured by return on assets. Hence, here our findings are somewhat contradictory to previous literature. On the other hand, our results showed that the EO has a positive effect on firm's actual growth level. Our results did not show significant results when we were measuring the impact of EO on one year growth but the relationship turned to be significant when the dependent variable was five year average of sales growth. Hence, the EO seems not to be a "quick fix" rather it has its effect in longer run. The result supports the general anticipation that EO is fundamentally pursuing growth for firms. One of the findings of this article was the positive link found between the risk-taking dimension of EO and the actual accounting figures based riskiness of the firm. Firms which had higher levels of risk-taking propensity showed also higher levels in the variation of profitability. Moreover, our interaction results here indicated that firms with higher level of strategic risk-taking produces higher level of profitability as well. This finding implied that the risk-return relationship is found also among small, non-listed companies.

4.2 The impact of global economic crisis on SMEs – does entrepreneurial orientation matter?

4.2.1 *Overall objective*

Article 2 investigated if there are some firm-specific intrinsic strategic characteristics which may enable firms to cope better with harsh economic conditions in the surrounding environment. This article focused on EO and its role in how a firm's financial performance and operations related to sales and profitability, short and long-term financing, personnel, competitive situation and terms of payment are affected by the ongoing financial crisis.

4.2.2 *Main findings*

The article showed that different dimensions of EO have opposite effects on a firm's financial performance during a time of recession. The results were obtained by linear regression analysis. Among the independent variables one variable represented risk-taking and another innovativeness and proactiveness. Those firms which are habitually more willing to take risks were affected more dramatically by the crisis than less risk-prone firms. Similarly, firms exhibiting higher levels of innovativeness and proactiveness performed better during this period.

As regards the relationship between the dimensions of EO and the manager's perceived impact of the crisis on the firm's operations, the article demonstrates that the overall impact of the recession was more detrimental to firms with more risk-taking propensity. These risk-taking firms had problems especially in operations related to both short and long-term financing. For instance, firms have been unable to pay dividends, raising finance has been hard and interest rate margins had risen, leading to a situation where firms had to delay investments. Moreover the managers felt that the lack of financing was detrimental to the future of the firm.

4.3 Does international entrepreneurship make firms more vulnerable? – the impact of global economic crisis on Finnish SMEs

4.3.1 *Overall objective*

Article 3 focused on how different dimensions of EO and a firm's degree of internationalization affect financial performance during times of turbulence. It has been pointed out in the literature (e.g. Yusuf, 2002) that the relationship between EO and a firm's performance needs to be scrutinized more when the business environment exhibits great amounts of uncertainty. The overall objective of this paper was to increase the understanding of how degree of internationalization, risk-taking, innovativeness and proactiveness are related to a firm's performance measured by various key ratios.

4.3.2 *Main findings*

In this article we used linear regression analysis to test how Finnish small and medium-sized firms were affected by a global economic crisis and if they could mitigate the negative effects of the economic turmoil by being more entrepreneurially oriented. We moreover tested how a firm's international activity affects its performance during the different stages of an economic crisis. Our main findings showed that the stage of a recession may determine how different strategic choices affect a firm's performance. The findings of this study demonstrated that risk-taking is detrimental to profitability and liquidity during the first stage of an economic crisis, whereas innovativeness and proactiveness can mitigate the negative effects of the crisis on liquidity. Interestingly, the firm's level of internationalization had effects similar to those of risk-taking. During the first years of the crisis firms which were internationally active suffered more and when the turmoil was abating the international activity drove profitability up again. The results also highlighted the contradictory nature of the EO dimensions, which is an interesting finding relating to the ongoing discussion on the nature of the entire EO construct.

4.4 Entrepreneurial Orientation in small firms – a values-attitudes-behavior approach

4.4.1 *Overall objective*

Article 4 focused on the values and value systems of entrepreneurs and their effects on an entrepreneur's attitudes and his/her behavior. The main aim of this article was to increase the understanding of the antecedents of entrepreneurially oriented behavior. In this article we utilized the values-attitudes-behavior framework to examine how an entrepreneur's work related values affected his attitudes towards growth and survival and finally how the values and attitudes shaped the entrepreneurially oriented behavior.

4.4.2 *Main findings*

This article demonstrated that the values-attitudes-behavior framework is a functional construct, also in the context of entrepreneurship. Psychological antecedents such as work values affected entrepreneurs' attitudes towards growth and survival and also their actual

behavior. The results obtained using structural equation modeling with the PLS approach showed that entrepreneurs with higher intrinsic work values behaved more entrepreneurially. The finding implies that entrepreneurs who value challenges, self-development or intellectual stimulation are more innovative, proactive and willing to take risks. Attitudes related to growth also had a positive effect on EO. One very interesting finding was that attitudes related to growth were found to be a mediator between intrinsic work values and entrepreneurial behavior. This finding implied that the mechanisms found with general values are also valid in the context of work values as intrinsic work values had an indirect effect on entrepreneurial behavior through the more concrete growth attitudes.

4.5 What drives EO in small firms? Roles of the owner-manager and financial conditions

4.5.1 Overall objective

Article 5 expanded the investigation of the antecedents of EO, started in the previous article. Besides psychological factors such as the personal values of the owner-manager this study also included factors such as the business founding experience of the entrepreneur and the firm's financial characteristics such as financial slack and conservatism in the search for factors affecting the level of EO.

4.5.2 Main findings

The main findings of this study obtained by linear regression analysis show that the main drivers for EO in small firms were the personal work related values of the owner-manager and his/her business founding experience. The approach in this study was somewhat simpler than in the preceding study as in this article we tested only the direct effects. As in the preceding article intrinsic work values were found to have a positive effect on EO. Extrinsic or material values related e.g. to benefits, job security, and comfort, had a negative effect on EO. These findings also appear plausible if we look at both the definition of the values and compare it to the definitions of EO. It was entirely to be expected that some linkage that was found. Valuing job security and comfort especially may reduce the willingness to take risks or act in

innovative ways. Values related to status, power, and influence also enhanced the level of EO. In this case the result may imply that those individuals who value status, power, and perhaps public acknowledgement, are more willing to take risks and to innovate. As reported elsewhere in the entrepreneurship literature (Salvato, 2004) the entrepreneur's prior experience has a positive effect on the level of EO. It was surprising that financial resources turned out not to have an effect on EO: In this respect our findings differed from those of Eggers *et al.* (2013), who showed that financial resources have a positive effect on EO.

4.6 Summary of overall results

The purpose of this section is to give a reader a clear idea of the most relevant relationships found to be significant in the framework of this dissertation. The Figure 4 sums up all the relevant findings of the five articles forming the second part of the dissertation. The ovals in the figure illustrate the key concepts of the dissertation, EO and its dimensions they behaved in our data, risk-taking as one separate factor whereas innovativeness and proactiveness merged into one factor. Merging the two dimensions of EO into one has not usually been done in earlier studies as they generally treat EO as a multidimensional or unidimensional construct (Rauch *et al.*, 2009). The merging of the innovativeness and proactiveness dimensions into one factor can be nevertheless justified, as Miller (2011) argued that combining the dimensions of EO may be warranted when the components are highly correlated, as in this case. Similarly, previous studies have also found that innovativeness and proactiveness are often highly correlated (Wang, 2008; Li *et al.*, 2009; Kraus, 2013) whereas the correlations between risk-taking and innovativeness and proactiveness are low (Kraus *et al.*, 2012; Lechner and Gudmundsson, 2012). The solid boxes are the performance indicators, which were used in the analysis as dependent variables and the boxes with broken lines are factors used to explain EO. Solid arrows indicate significant positive relationships whereas broken arrows represent significant negative effects.

When studying EO in the context of small and medium-sized enterprises the main finding was that EO has a positive effect on a firm's growth over a longer time period here the findings were in line with those of earlier studies (e.g. Covin *et al.*, 2006; Harms *et al.*, 2010). Contrary to earlier finding in the literature, EO has no impact on the profitability of the firm.

This finding highlights the concern related to combining performance measures of different performance dimensions into one single measure, as different dimensions like growth and profitability may collide, and it is moreover hard to draw more specific conclusions about the role of EO if using only a one combined performance measure.

When the focus is on the dimensions of EO and their performance implication, the results revealed the conflicting role of risk-taking and innovativeness-proactiveness. The conflict is most obvious in the case of liquidity, as risk-taking tends to decrease it while innovativeness-proactiveness has the opposite effect. Furthermore, risk-taking was negatively related to both profitability and growth. Similarly, risk-taking had a negative effect on how managers felt the crisis had impacted their firms. As the negative role of risk-taking is emphasized by the results it is worth remembering that these effects were captured during the economic crisis and that the role of risk-taking may be highly context reliant. The contradictory effects of the EO dimensions on performance have also been reported in earlier studies hence the results of this dissertation are in line with earlier findings. For instance, Lumpkin and Dess (2001) and Lechner and Gudmundsson (2012) showed that the separate dimensions of EO may have conflicting effects on performance.

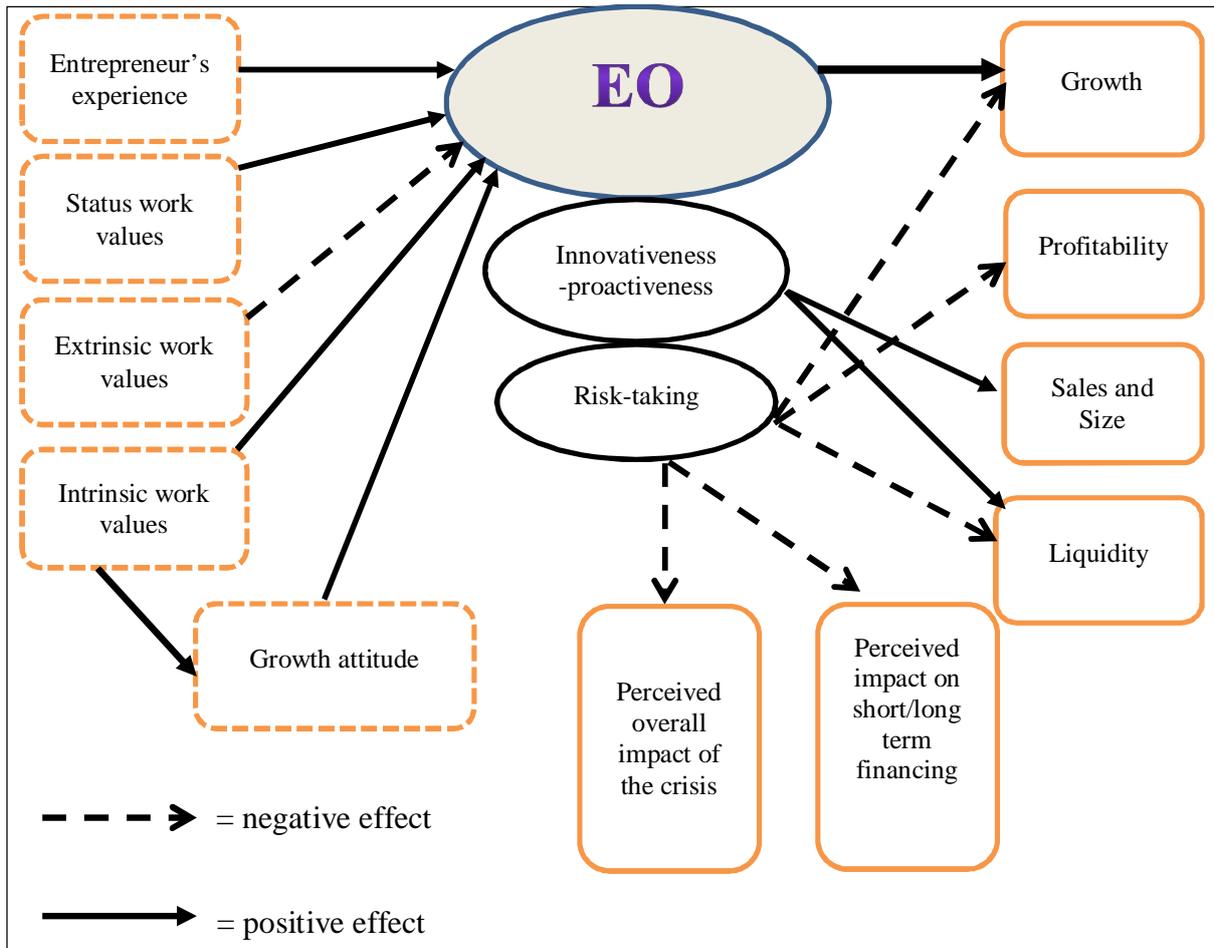


Figure 4. Summary of significant relationships in the articles

After the performance implications of EO the second main theme in this dissertation was the examination of the antecedents of EO. Here a set of work related values and attitudes, prior experience and firm's financial characteristics were used to explain the EO that can be considered to be behavior. The financial characteristics were omitted from Figure 4 because they did not have an impact on EO hence this finding was in contrary to the findings of Entrialgo *et al.* (2001) and Eggers *et al.* (2013).

Similarly to Salvato (2004) and Altinay and Wang (2011) the results of this dissertation showed that the prior entrepreneurship experience of the entrepreneur promotes the level of EO, suggesting that the more experienced entrepreneurs exhibit more innovative, proactive, and risk-taking behavior. Intrinsic and status values like the attitudes towards growth had the same kind of impact on EO. Similar findings can also be found in earlier studies as the

intrinsic work values resemble rather closely the need for achievement factor that was found to positively affect the level of EO (Okhominina, 2010). On the other hand, extrinsic values which are linked e.g. to benefits, job security, and comfort tend to decrease the propensity to behave entrepreneurially.

Interestingly, the results also showed that the attitudes related to growth mediated between intrinsic work values and entrepreneurial behavior. This indicates that the mechanisms found with general values are also valid in the context of more specific values as values have an indirect effect on behavior through the more concrete and domain-specific attitudes.

The contribution and the implications of these results and the whole dissertation are discussed in the following chapter.

5. CONCLUSIONS

The main aim in this dissertation was to explore the performance implications of EO during a period of economic crisis causing extraordinary turbulence to the business environment. The second aim was to explore the factors determining the level of EO. In the latter aim the focus was mostly on entrepreneurs' work related values as work values are often viewed as a crucial determinant of individuals' work related behavior.

This chapter gives answers to the research questions set in the introductory chapter and presents the theoretical and practical contributions of the dissertation. It also discusses the limitations of the dissertation as well as questions that were not thoroughly addressed, giving some guidelines and suggestions for future research.

5.1 Answering the research questions

This section provides more detailed answers to the research questions of this dissertation. First, answers will be provided to the two sub-research questions. After that the main research question of the dissertation "*What are the main drivers and performance implications of EO for SMEs in time of economic crisis?*" will be answered.

The first sub-question was "*What are the performance implications of EO and the role of EO in how firms are treated by the crisis at operational level?*" The first three articles were aimed to shed light on this question.

The Article 1 focused on the *implications of EO on the dynamics of profitability and growth* and provided evidence that EO is positively related to firm performance in general. Similarly to the findings of Harms *et al.* (2010) results of this article indicated that EO has a significant and positive effect on a firm's growth. Furthermore, the results also revealed an interesting pattern as there was no significant relationship between EO and growth rate over one year, but instead EO had a positive effect on the five-year-average growth rate. This implies that EO cannot be seen as a "quick fix" that instantly affects the performance of the firm.

Another interesting finding was a relationship between the risk-taking dimension and the risk measure based on financial figures. Firms exhibiting the highest levels of strategic risk-taking had the highest levels of financial risk. Moreover, profitability seemed also be related to these two risk measures as the risk level was decidedly high in the category of the most profitable firms. In light of these findings it can be concluded that EO definitely has implications for growth, especially in the longer term, suggesting that an investment in EO today is an investment for the future. Furthermore, the risk-taking component of EO significantly determines the objective risk profile of the firm.

The second article approached the research sub-question from whether *EO can mitigate the negative effects of economic crisis on a firm's performance and operations*. The findings of the article 2 showed that the innovativeness-proactiveness and risk-taking dimensions of EO have opposite effects on a firm's financial performance during times of economic crisis. The risk taker firms were hit harder by the crisis and on the other hand the firms exhibiting higher levels of innovativeness and proactiveness performed better. Hence this dissertation showed that the dimension of EO may have conflicting effects and this finding is consistent with those of earlier studies (Lumpkin and Dess, 2001; Lechner and Gudmundsson, 2012).

The relationship between the dimensions of EO and the manager's perceived impact of the crisis on the firm's operations emphasized the negative role of risk-taking. The overall impact of the economic crisis was more detrimental for risk-taking firms. Similarly, these risk-taking firms had problems related to finance.

For this issue there is no single right answer, rather trying to answer this question raised even more questions relating to the nature of the EO construct and to the correct approach to addressing the concept. If EO is considered a reflective construct, then the answer to the question might be that in the case of the economic crisis pursuing high levels of EO may lead to adverse outcomes in issues related to finance, but on the other hand the positive effects on revenues might offset these problems. The overall effect of EO may still be positive despite the conflicting dimensions.

Article 3 addresses the sub-question by focusing on *how the dimensions of EO and the firm's level of internationalization affect firm's financial performance*. The results showed the

context dependence of the performance implications of both the dimensions of EO and the firm's level of internationalization. The findings showed that risk-taking is detrimental during the first stage of an economic crisis, whereas innovativeness and proactiveness can counterbalance its negative effects. The firm's level of internationalization had effects similar to those of risk-taking. During the first years of the crisis firms which were internationally active suffered more and when the turmoil abated the international activity increased profitability

As the phase of a crisis determined how different strategic choices affect a firm's performance, the results emphasize the importance of a firm's ability to adjust its actions and strategic choices as much as possible. Results here support the view of Zahra and Garvis (2000) that striving to pursue as high EO as possible may lead to undesired end results under certain conditions.

The second sub-question was "*What are the main drivers of EO in SMEs?*" Articles four and five were intended to answer this question.

The Article 4 approached the sub-question by focusing on *the roles of entrepreneurs' work values and goal related attitudes as determinants of EO*. The findings showed that an entrepreneur's intrinsic work values related to the psychological satisfaction offered by the job and an individual's attitudes towards growth are significant determinants of EO. Moreover, the growth attitudes were found to have a mediating effect between values and EO.

The finding showed that those entrepreneurs who value the challenges and intellectual stimulation offered by the job behave more entrepreneurially i.e. they are more innovative, proactive, and risk-taking when running their firms. This result also showed that frameworks relating to general values and how they affect attitudes and ultimately behavior are also valid in the context of entrepreneurship.

The fifth and the last article examined if *entrepreneurs' work values, prior experience and firms' financial attributes can explain the level of EO*. Similarly to the findings of article 4 intrinsic work values were positively related to EO. Values related to status as well as

entrepreneur's prior experience also had a positive effect on entrepreneurial behavior. Findings related to effects of CEO's experience are somewhat contradictory as Salvato (2004) and Altinay and Wang (2011) found a positive relationship between experience and the level of EO whereas the results of Sciascia *et al.* (2006) indicated a negative relationship. Extrinsic values related to comfort, benefits, and job security had a negative effect on EO and the firms' financial attributes had no effect at all, the latter finding is in contrast to the findings of Eggers *et al.* (2013), whereas factors resembling intrinsic work values have been found to have a positive effect on EO (Okhomina, 2010).

Individuals' values related to work and prior experiences of entrepreneurship are strong determinants of EO. The personal hierarchy and weighting of the work values also influence the individual's work related behavior as some of the values impacted positively and some of them negatively on EO.

Since answers to sub questions were found, it is possible to answer the main research questions of this dissertation "*What are the main drivers and performance implications of EO for SMEs in time of economic crisis?*" As the firm's growth rate is considered to be one of the tools for measuring firm performance, EO was found to be a significant and positive factor behind a firm's long run growth. Hence we can say that EO has positive implications for firm performance. But on the other hand during a time of economic crisis the different dimensions of EO can have both positive and negative effects on the performance of SMEs. Therefore it is difficult to give one definitive answer to this question as the performance implications tend to be highly context and measure dependent. The performance implications varied across different stages of the crisis and were also dependent on what performance measure was used.

The main drivers of EO in SMEs were found to be the personal work related values of the entrepreneur and his/her prior experience as an entrepreneur. The intrinsic work values related to interest, responsibility, challenge, variety, self-development or intellectual stimulation and values related to status, power, achievement, advancement status, and recognition had a positive effect on the level of EO. On the other hand extrinsic values which are related to high income, material possession, benefits such as generous holidays, job security, and comfort through good working conditions lower the level of EO.

5.2 Contributions

This dissertation contributes to the academic entrepreneurship literature. The economic crisis offered an extraordinary and unique opportunity to study the implications of EO. Although it is a much studied concept, there is a consensus in the literature that the relationship between EO and firm performance depends on the conditions in the surrounding business environment (Covin and Slevin, 1989) and that it needs further examination (Yusuf, 2002). The crisis caused instability and uncertainty in the business environment that has not afflicted economies since the 1930's (Smallbone *et al.*, 2012). Therefore the timing of this dissertation makes it one of the first to study the implications of EO on SMEs and it derives some of its contribution from the first mover's advantage. Moreover, there is currently actually a call for studies of this kind as Kraus *et al.* (2012) pointed out that there are very few studies focusing on the firm capabilities and conditions needed when firms face acute market uncertainty and instability.

Besides being in the forefront of studies focusing on EO during a time of extreme environmental and market turbulence, this dissertation took novel approaches to the topic. It successfully combined items from earlier studies (Geroski and Gregg, 1993) on the effects of recession. Those effects are now described in much greater detail than mere changes in the figures of income statements. Here the focus is on the effects of the crisis at the operational level, meaning that we had for our analysis data based on managers' own perceptions of how the crisis affected the firms' trading position, work force composition, access to finance etc. This can be considered one the greatest contributions of the work as it provides new knowledge about the implications of EO on the factors which firms face every day while doing business.

This dissertation also contributes the rather limited body of literature focusing on the determinants of EO (e.g. Salvato, 2004; Jalali, 2012; Eggers *et al.*, 2013). As the mainly positive performance implications of EO have been shown in many studies (e.g. De Clercq *et al.*, 2010; Grande *et al.*, 2011) and the importance of entrepreneurship is widely recognized, it is worthwhile to try to find the factors which promote EO. From the limited group of studies

attempting to explain EO, an even more limited number of studies (Okhominina, 2010; Ullah *et al.*, 2011) focus on psychological traits as antecedents of EO even though there is currently a call for such an approach in the literature. For instance, Pines *et al.* (2012, pp. 96) argued that “*in recent years research on entrepreneurial personality has re-emerged as an important topic of investigation and leading entrepreneurship scholars have noted that a psychological approach is necessary to understand entrepreneurship*”. In addition, Miller and Le Breton-Miller (2011) argued that there is room for studies focusing on the impact of different types of owners on EO. Likewise Wiklund (1999) argued that when applied to small firms, EO might be seen as a result of individual-level determinants. Therefore, the single main and significant contribution of this dissertation is the successful application of work related values as antecedents of EO and showing that personal work values significantly determine entrepreneurially oriented behavior. This relationship has many practical implications to be discussed later.

This dissertation also makes some minor contribution to the discussion on the context dependency of the EO-performance relationship. Grande *et al.* (2011) discussed the effect of risk dimensions on performance. Although studies such as Frank *et al.* (2007) have shown a positive relationship between risk-taking propensity and business success, Grande *et al.* (2011) doubted that under market turbulence this relationship might be negative. This dissertation confirms this assumption by showing that the risk-taking dimension actually weakened the firm performance during times of economic crisis.

5.3 Managerial, theoretical, and policy implications

The findings of this dissertation have several implications for managers, scholars, and policy-makers. First, from the practical point of view, our results concerning the relationship between EO and firm performance suggest that managers should be aware of the effects of EO on performance and the firm’s operations in different business cycles. Especially when breaking down the overall effect of EO into smaller elements, the results reveal that managers should notice that actions related to risk-taking such as venturing into the unknown, heavy borrowing, or committing large portions of corporate assets in uncertain environments may have negative effects during economic downturns. Therefore managers should consider before

making decisions about investments or ventures entailing high risk. On the other hand, the results of the dissertation emphasizes the positive role of innovativeness and proactiveness, suggesting that managers should be innovative and proactive as these factors seem to mitigate the negative effects inherent in extremely harsh business conditions.

This dissertation also has implications for scholars, as it demonstrates that the relationship between EO and firm performance is not so straightforward and there are many aspects to be considered. First, the measures used to gauge the performance may easily alter the findings, especially if the measures used combine different performance measures into one single indicator as the different performance dimensions may be contradictory and cancel each other out, for instance growth and profitability. Therefore it may be worthwhile to use only one dimension of performance at a time in analyses if only possible. Similar issues are worth bearing in mind regarding the concept of EO. Depending on whether EO is treated as a unidimensional phenomenon or if the level of analysis is the subdimensions of EO can also affect the results. As our results revealed, the dimension can have opposite effects on performance and the context may also determine which dimension is stronger. For instance, our results showed that, depending on the stage of the recession, different dimensions affected performance at different stages.

Our results also have implications for policy-makers as the empirical evidence of the dissertation suggests that EO and especially innovativeness have positive effects on firm performance and they also may counterbalance the impact of economic turbulence. Therefore, policy-makers should be aware of the importance of creating such support programs which endorse entrepreneurship and initiatives for innovations of SMEs. Moreover, including issues related to entrepreneurship in all levels of education could enhance the awareness of entrepreneurship as a career choice and hence increase the level of vital entrepreneurial activity in the future. Among many other things, with these aforementioned actions it may be possible to reinforce the respective national economy the better to cope with the challenges of the future.

The confirmation of the relationship between personal work values and entrepreneurially oriented behavior may have many practical implications. For instance, when recruiting team

members or employees for projects, start-ups or other ventures where entrepreneurial behavior is needed, applicants' work values could be used at least as some level indicator regarding their tendencies towards the desired behavior. In career counseling the work values could likewise be used as tools for identifying possible future entrepreneurs.

5.4 Limitations and suggestions for future research

Some caution should be exercised in the interpretation of the findings because, like all research, this dissertation has also some limitations that should be discussed. First, as some of the models used here are somewhat simplified, it might be important to consider adding relevant moderating or mediating variables such as those related to environment and cultural factors into the analyses. Another limitation to be noted is the lack of an opportunity to control for the effects of the business sector. This is a limitation to be noted as some previous studies have noted that industry plays an important role in the EO-performance relationship. Unfortunately, our rather small data set did not allow us to test the industry effects successfully. Secondly, a longitudinal study design – rather than the present cross-sectional design – would give us a better platform to explore the causal relationships among the research variables. Now the lack of longitudinal data reduces confidence in causal effects, especially in the case of such relationships which have not been so extensively examined in the literature, such as the relationship between financial conditions and EO. The closeness of the measurement time point of EO and the annual performance indicators might also cause some problems regarding the estimated relationships as the construct of EO is associated with firm success, particularly in the long-run (Eggers *et al.*, 2013). For this limitation the passing of time is the only cure. Thirdly, there are some possible limitations caused by our rather small sample consisting of fairly mature and conventional small firms. The type of sample firms may have an effect on how the work values affect behavior, hence this limitation has an interesting implication for future research; focusing on new ventures or social enterprises would offer a different perspective on the topic. Similarly another sample based limitation of this dissertation is the survivorship bias, as this dissertation only examined entrepreneurs currently in business. An assessment of those entrepreneurs who were not successful would enhance the understanding of EO and its relationship with failures of firms. Finally, one limitation is related to the generalizability of the results. As this dissertation focused only on

Finland, it remains to be seen if our findings can be transferred to other countries. This issue is especially relevant as regards the work values and their relationship to EO as values are generally argued to be related to (national) culture and hence they may vary across countries (Defever *et al.*, 2011).

The framework of work values together with EO also opens up some possible avenues for future research. One possible topic would be to study the context dependence of work values. For instance, to examine if there are differences in work values across entrepreneurs in different industries or to compare some special cases like entrepreneurs in social enterprises and to see whether they value different aspects in their work than entrepreneurs in general.

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PART II: THE ARTICLES

ARTICLE I

Soininen, J., Martikainen, M., Puumalainen, K. and Kyläheiko, K. (2012).

**ENTREPRENEURIAL ORIENTATION: GROWTH AND PROFITABILITY OF
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Entrepreneurial orientation: Growth and profitability of Finnish small- and medium-sized enterprises [☆]

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ABSTRACT

Our paper investigates, whether there exist intrinsic strategic characteristics, which enables some firms to tolerate economic difficulties stronger than their companions. Tolerance as such also indicates if SMEs as investments are providing return accordingly to their risk level. In our view, the differences in entrepreneurial orientation could be a decisive explainer behind this phenomenon. This paper contributes to previous literature by investigating, how the firm's internal strategic behavior is able to improve the firm performance, and also by showing that SMEs are providing the compensation of risk to investors. Our results indicate that entrepreneurial orientation affects directly firm's growth rate.

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1. Introduction

Small- and medium-sized enterprises (SMEs) have become an increasingly important component of economic development representing a substantial proportion of the national economies all around the world (Paul et al., 2007; Karpak and Topcu, 2010). Recent literature denotes that although large firms have historically been main job creators, the trend has reversed in the last twenty years, as the number of small- and medium-sized enterprises (SMEs) and jobs created by them have remarkably increased. Previous research highlights that especially during economic downturns, the role of SMEs and entrepreneurship is stronger (see for instance Carree and Thurik, 1998). Current global economic crisis seems to be especially hard for large companies. Therefore, SMEs are facing strong expectations for their role to be key players when economies will be recovering from the present global recession. Previous research has also widely investigated the firms' characteristics creating profitability. However, the results obtained are inconclusive or even contradictory. Consequently, many researchers have concluded that more research is needed in that area (e.g. Lumpkin and Dess, 1996), since different business and institutional structures and industrial characteristics are creating a large variability to findings in this research area. Given the important role of SMEs, it is essential to further investigate if there exist some intrinsic strategic characteristics, which affect firm's growth and profitability.

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Ever since the 1980s, entrepreneurial orientation (EO) has emerged as a major construct within the strategic management and entrepreneurship literature. Covin et al. (2006) define EO as a strategic construct whose conceptual domain includes certain firm-level outcomes and management-related preferences, beliefs, and behaviors as expressed among a firm's top-level managers. Runyan et al. (2008) argue that EO is evidenced through visible entrepreneurial tendencies toward innovativeness, proactiveness and risk taking. Miller (1983) and later Covin and Slevin (1989) operationalized these characteristics and found them central to EO. According to Rauch et al. (2009) these three dimensions of the EO construct can be defined as follows:

Innovativeness represents creativity and experimentation through the introduction of new products/services as well as technological leadership via R&D in new processes. It comes close to the Schumpeterian idea of creating new combinations (Jantunen et al., 2005).

Risk taking describes the nature of easily venturing into the unknown, borrowing heavily, and/or committing remarkable resources to ventures in uncertain environments.

Proactiveness is an opportunity-seeking, forward-looking perspective characterized by the introduction of new products and services ahead of competition and acting in anticipation of the future demand. This kind of opportunity-seeking and seizing behavior has also been characterized as strategic agility (Bullinger, 1999), and comes close to Teece's (2007) idea of dynamic capabilities that make it possible to sense weak signals and seize them by entrepreneurial investment behavior.

In recent years there has been an increased focus on the relationship between firm's strategic orientation and firm performance (Madsen, 2007). Prior studies have generally found a

positive relationship between EO and firm performance (Jantunen et al., 2005; Wiklund and Shepherd, 2005; Madsen, 2007). However, there are also studies where such a relationship has not been found (Smart and Conant, 1994). One reason might be that the measure that has been used to assess the firm performance has typically been a combination of both profitability and growth measures (Covin and Slevin, 1989; Wiklund, 1999; Avlonitis and Salavou, 2007). However, there are also few studies that have purely explored the specific relationship between EO and the firm growth (Covin et al., 2006; Moreno and Casillas, 2008). Findings of these studies have confirmed that there really exist a positive relationship between EO and the firm's rate of growth.

The purpose of this study is to explore whether there exist positive relationships between EO and the firm profitability as well as between EO and the firm's rate of growth in the context of Finnish SMEs. Although the relationship between the firm's entrepreneurial posture and its financial performance is already abundantly studied by the prior literature (e.g. Zahra and Covin, 1995; Keh et al., 2007) this study contributes to entrepreneurship research in two respects. First, to be able to more thoroughly investigate the importance of internal factors generating the firm's growth and profitability, these two relationships (i.e. EO&profitability and EO&growth) are analyzed separately. This kind of an approach is rational and well grounded, since, e.g. Moreno and Casillas (2008) argue that the traditionally used firm performance concept that combines the indicators associated with profitability and growth is two-dimensional in a way where both of the dimensions can be sometimes contradictory. They also point out that it would be worthwhile to explore whether there is a positive relationship between the firms's EO and its growth. Moreover, these dimensions of EO&profitability and EO&growth are analyzed separately to be able to conclude if risk taken, measured as EO, is resulting SMEs to provide higher returns for investors. As investors are seen for instance, firm owners. This is highly relevant especially in the framework of non-listed SMEs, since firm risk is especially difficult to measure for non-listed companies, since market based risk measures, such as the beta, cannot be used due to the lack of the daily stock price information. Second, this paper contributes to previous literature by investigating how different EO dimensions are related to the firm risk. Moreover, we try to find out whether the firm risk is simultaneously positively linked with firm performance. Third, as Rauch et al. (2009) point out prior EO literature has mainly focused on the U.S. companies. In our view, Finland provides an interesting new setting for this type of analysis, since it constitutes a good example of a competitive and innovative business environment. The SME's can be said to be the backbone of the Finnish economy. The importance of the SMEs in Finland can be characterized by the facts that they are currently estimated to represent 99.9% of all the Finnish business enterprises and to employ 62% of the work force in the private sector. The SME's were also in the extremely salient role in the 1990s when Finland was recovering from the one of the deepest recessions in western world during the post-war era.

The paper is structured as follows: Section 2 defines our main concepts, reviews the relevant literature and presents the research hypotheses to be empirically analyzed. Then follows a description of the methodology used in empirical research in Section 3. In Section 4 the main findings are presented. Finally, Section 5 summarizes the results along with their implications.

2. Theoretical framework and hypotheses

A substantial amount of research has examined the concept of entrepreneurial orientation (EO) during the last three decades so

that one can state that has become one of the central concepts in the domain of entrepreneurship studies (Covin et al., 2006). For instance, Rauch et al. (2009) point out in their meta-analysis, that more than 100 studies dealing with EO have been conducted, which has led to a wide acceptance of the conceptual meaning and relevance of the concept.

2.1. The dimensions of entrepreneurial orientation concept

Miller (1983) conceptualized the three focal dimensions of EO as *innovativeness*, *risk taking* and *proactiveness* and these three dimensions have been since used consistently in the literature (Dimitratos et al., 2004; Kemelgor, 2002). Lumpkin and Dess (1996) describe the innovativeness as follows: *Innovativeness* reflects a firm's Schumpeterian tendency to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products, services, or technological processes. Innovativeness represents a basic willingness to depart from existing technologies or practices and venture beyond the current state of art. They see innovativeness as an important component of an EO, because it reflects an important means through which firms pursue new opportunities.

According to Baird and Thomas (1985) there are three different types of strategic *risk taking* such as venturing in to the unknown, heavy borrowing, and/or committing large portions of corporate assets in uncertain environments. Similarly, Lumpkin and Dess (1996) state that firms with entrepreneurial orientation are often typified by risk-taking behavior, such as incurring heavy debt or making significant resource commitments, in the interests of obtaining high returns by seizing opportunities in the marketplace.

Rauch et al. (2009) describe *proactiveness* as an opportunity-seeking, forward-looking perspective characterized by the introduction of new services and products ahead of the competition and acting in anticipation of future demand. In this context it becomes close the modern interpretation launched by Teece (2007) when defining dynamic capabilities as entrepreneurial acts to sense weak signals and seize the opportunity by investment. Besides the three most commonly used dimensions above Lumpkin and Dess (1996) argue that two additional dimensions *competitive aggressiveness* and *autonomy* would also be salient components of EO. Lumpkin and Dess (2001) define these two additional dimensions as follows: *competitive aggressiveness* is said to reflect the intensity of a firm's effort to outperform industry rivals, characterized by a strong offensive posture and a forceful response to competitor's actions. *Autonomy* is independent action by an individual or team aimed at bringing forth a business model or vision and carrying it through to completion.

However, the usage of the EO model with all the aforementioned five dimensions has been rare in the EO literature (e.g. George et al., 2001) when compared with the use of the model with three dimensions. Moreover, Rauch et al. (2009) state that the focal dimensions of EO are usually highly intercorrelated with each other, which leads to combining these dimensions into one single factor. Therefore, scholars such as Covin and Slevin (1989) argue that the EO construct is best viewed as a unidimensional concept, whereas Lumpkin and Dess (2001), for example, suggest that the different dimensions of EO may relate differently to firm performance and hence promote the use of the multidimensional EO as an explainer. However, in this study we will be using the unidimensional approach because it is more commonly used in the research.

2.2. The EO–performance relationship

The modern business environment is an environment where the pace of change is fast, product and business model lifecycles

are shortened, the future profit streams from existing operations are uncertain and businesses need to constantly seek out new opportunities. Therefore, firms may benefit from adopting an EO, i.e. being innovative, risk taking and proactive (Rauch et al., 2009). Wiklund (1999) relates the positive influence of EO on performance to the first-mover advantages and the tendency to take advantage of emerging opportunities implied by EO, i.e. to sense weak signals and seize the opportunity. Zahra and Covin (1995) argue that firms with EO can “skim” the markets ahead of their competitors by targeting premium market segments and charging high prices. Wiklund (1999) points out that these firms monitor market changes and respond rapidly, thus capitalizing on emerging opportunities. Innovation keeps them ahead of their competitors, gaining a competitive advantage that leads to improved financial results. Proactiveness gives the firms the capacity to present new products or services to the market before their competitors, which gives them also a competitive advantage. Furthermore, Wiklund (1999) also states that there is a reason to believe that the relation between EO and performance may be especially strong in the context of small firms. Most likely, smallness per se enhances flexibility and innovation but limits competitiveness in other strategic dimensions.

Several empirical studies have found that firms with high EO perform better than firms with low EO. For example, Keh et al. (2007) found out that EO plays an important role in enhancing firm performance. Similarly, Wiklund and Shepherd (2003) found a strong correlation ($r=.34$) between EO and performance. Wiklund (1999) showed that investments in EO may be worthwhile for small firms since there is a positive relationship between EO and performance and that the relationship actually increases over time. On the other hand, some studies have shown that the relationship between EO and performance is not that straightforward. Bhuian et al. (2005) among others found that the entrepreneurship is one of the key elements in organizational success, but the relationship is shaped like inverted U, meaning that a high degree of entrepreneurship is not always desirable in certain market and structural conditions. In any case, we launch our first hypothesis according to the “received view” as follows:

H1. Entrepreneurial orientation is positively related to profitability of SMEs.

The prior literature has not reached consensus on measures to assess the small firm performance (Karpak and Topcu, 2010). Several studies have used perceived performance indicator to assess firm performance (Lumpkin and Dess, 2001; Wiklund and Shepherd, 2003; Madsen, 2007; Runyan et al., 2008). The items that were used to form the performance indicator typically based on a manager’s subjective views about the firm’s profitability, growth and market share in relative to its most important competitors. On the other hand, some studies have utilized financial statements of firms to capture the both growth and profitability dimension of company financial performance (Bhuian et al., 2005; Covin et al., 2006). One common factor for the performance indicators based either on perceived data or secondary data is the fact that in both cases the indicator contains growth measures and profitability measures. However, according to Moreno and Casillas (2008) this kind of an approach may not be the most suitable because the growth dimension and profitability dimension may sometimes be contradictory and, therefore, they should not be combined into one single indicator.

Growth is the dominant goal of the entrepreneurial organization stated Mintzberg (1973) almost four decades ago. Later on, Lumpkin and Dess (1996) noted that an EO is, essentially, a growth orientation. Similarly, Stewart and Roth (2001) referred to entrepreneurial small business owners as growth oriented.

However, despite these widely acknowledged facts, the relationship between EO and growth dimension of firm performance has been studied remarkably seldom. Covin et al. (2006) argued that EO effectiveness is appropriately measured using criteria that reflect a firm’s success at translating entrepreneurial opportunities into growth trajectories. In their study they used sales growth rate as a growth proxy when exploring the relation between EO and growth. Findings of their study showed that there is a positive relationship between EO and sales growth rate. Furthermore, they also suggested that the effects of EO on a firm’s growth rate depend on several strategic process-related variables. On the other hand, Moreno and Casillas (2008) did not find a direct influence between EO and firm growth to be significant. However, their results suggested that there is an indirect relationship via the mediating and moderating role of other variables such as strategy, environment, or resources of the firm. According to Moreno and Casillas (2008) their results underline the complexity of the relationship between EO and firm growth. In spite of the skeptic views we formulate our second hypothesis as follows:

H2. Entrepreneurial orientation is positively related to growth of SMEs.

2.3. Firm return and risk

Risk is a variable that has been used to calibrate required return dating back already to merchants in ancient China. Merchants used to adjust the price of their wares by the riskiness of their trading routes. The greater the risk to get robbed and loose income, the higher price they had to charge to maintain an acceptable return on their invested assets (Lusk et al., 2008). This same concept regarding the positive relationship between the risk and the return is nowadays the cornerstone in finance theory. Nickel and Rodriguez (2002) argue that this relationship arises primarily from a risk-averse reasoning: people will not support higher risk for the same level of return; higher risk will be accepted only if it is compensated with a higher return.

Strong theoretical framework to show the relation between risk-return is presented in finance literature captured by the Capital Asset Pricing Model (CAPM; Sharpe (1964) and by Lintner (1965)). CAPM relates firm returns directly to the firm risk. The CAPM is depicted as below:

$$E(R_{it}) = R_f + \beta_i(E(R_m) - R_f), \quad (1)$$

where $E(R_{it})$ is the expected return for stock i at time t . The term R_f is the risk-free rate, the term β_i is the sensitivity to changes in market portfolio of stock i , therefore the Beta is the measure of systematic risk. The market risk premium is represented by the term $(E(R_m) - R_f)$, where $E(R_m)$ is the average return on the market.

CAPM states that the riskier is the firm the more return investors are entitled to expect from the investment in the long run. However, at the same time with the higher expectations in returns the risk means higher variability in expected returns. The relationship between risk and return has been widely tested with financial data from the stock market, and using the beta of CAPM as the risk measure (Nickel and Rodriguez, 2002). The achieved results of the large set of literature are a little bit contradictory, but the main conclusion is that theoretically CAPM stays solid. Empirical results of the model vary depending on the research setting, for instance the early studies in the area had obtained a significant positive relationship, as the CAPM theory postulates (see Black et al., 1972; Fama and Macbeth, 1973). The risk-expected return trade-off is also tested by using other techniques than the CAPM, and a large number of studies (for instance, León et al., 2007) have found a positive significant relationship

between expected market return and conditional variance (i.e. risk) on equity indices.

Similarly, to the stock market framework above, the same concept of the trade-off between risk and return has been also brought into accounting and organizational research. In this field of research the findings are somewhat contradictory. Some studies have reported negative relationship between risk and return (Bromilley, 1991), whereas for instance Fiegenbaum and Thomas (1986) found a significant relationship between market risk measure and accounting return. In our research we are investigating whether firm risk measured from financial statements is related to higher performance of the firm. Especially we are interested to find out if EO dimensions are found to be related simultaneously to higher returns and higher risk and therefore we formulate our third hypothesis as follows:

H3. The risk-taking component of EO is related to the higher variability and level in profitability among SMEs over time.

3. Research method used

3.1. Sample and data collection

The empirical data used to test the hypotheses were drawn from a mail survey conducted in spring 2009 by means of a structured questionnaire. The initial population consisted of Finnish small private limited companies (they typically have few shareholders and are usually owner-managed family businesses) with a sales turnover between 1 and 10 million euros. Hypotheses were tested in a multiple industry setting, because of a greater generalizability. A total of 13,495 firms were identified from the Voitto+- database, and a systematic random sample of 1026 firms was drawn. The pre-tested survey questionnaire with an introductory cover letter was mailed to the respondents, assured of confidentiality and promised a summary of the results. A follow-up was sent to those who had not responded within two weeks. Final responses were received from 194 companies, yielding a satisfactory effective response rate of 18.9% (194/1026). It was possible to get financial information about the companies via Voitto+ database that is a commercial database containing financial statements of over 82,000 Finnish firms. The financial measures used in this study are based on the financial statements of 2008. Nonresponse bias was checked on a number of key variables, such as growth rate, profitability, sales and age and EO, by comparing the early (first-round) respondents with the late respondents (following the suggestions of Armstrong and Overton, 1977) and we did not find any significant differences between the two groups.

3.2. Measures

We are utilizing 9 items to capture the *three dimensions of EO* conceptualized by Miller (1983). The items are based on the work of Covin and Slevin (1990). However, they are slightly adapted to fit better with the context of Finnish small enterprises. A principal component analysis of the EO items (see Table 1) resulted in two components explaining together 61% of the variance in the items. The items measuring innovativeness and proactiveness merged into the first component, while risk-taking items loaded highly on the second component. The internal consistency of the scales was good, as the Cronbach alpha value for innovativeness & proactiveness was .865 and for risk taking .671, respectively.

Growth was measured by three different indicators: the last year's sales growth percentage and average growth over the past five years represented actual growth and a multi-item scale called growth orientation (GO) represented future growth aspirations.

Table 1
Principal component loadings of the EO items.

Item	Innovativeness and Proactiveness	Risk	
Communality			
Continuous renewal and innovation are important for our company	.81	.24	.71
We invest heavily in developing new products, services and business practices	.81	.17	.68
In our company, new ideas come up all the time	.79	.12	.64
We aim at being at the forefront of development in our business sector	.76	.22	.63
Lately we have launched many new products/ services	.73	.14	.55
Our company often acts before the competitors do	.63	.19	.43
In uncertain situations we are not afraid to take substantial risks	<.20	.82	.68
Bold action is necessary to achieve our company's objectives	.32	.74	.64
We prefer the cautious line of action even if some opportunity might be lost that way	-.20	-.70	.52
Eigenvalue	4.22	1.25	
Cumulative % of variance	46.9	60.8	

Principal Component Analysis with Varimax rotation. KMO measure of sampling adequacy=.846, Bartlett Chi Square=.686 with 36 d.f., $p < .001$, MSA for individual items ranged from .73 to .93.

The items of the growth orientation scale were measured on a Likert scale (1=completely disagree, 5=completely agree) and worded as follows: (1) our purpose is to grow without compromising on profitability, (2) we intend to expand our business to new customer segments, and (3) we intend to expand our product/service offerings. The final scale was computed as the average value of the items and its internal consistency was satisfactory (Cronbach alpha=.693).

The *sales growth percentages* and *profitability* measures were obtained from the Voitto+- database. Profitability was evaluated as return on assets (ROA) over the years 2004–2007. The average value and coefficient of variation over the four years were used in the analysis as indicators of ROA level and ROA variability, respectively. Similar to Covin et al. (2006), we used firm-specific control variables, such as firm age and size, to control for their possible effect on firm's growth and profitability. These measures were also obtained from the Voitto+ database.

4. Results

The descriptive information of our key variables in the sample is shown in Table 2. The median size of the respondent companies was about two million euro in sales turnover and ten employees. The largest companies had about 11 million euro turnover and 160 employees. The ages of the companies varied from three to more than a hundred years, with an average of about 19 years.

The distributions of the combined entrepreneurial orientation scale and also those of its two dimensions were normally distributed with a mean value close to the midpoint of the scale. The average risk-taking propensity was a bit lower than the mean

Table 2
Descriptive statistics.

	N	Mean	Median	Std. Deviation	Minimum	Maximum
Sales (1000€)	193	2740.39	1969.00	2049.83	.00	10,803.40
Employees	160	17.11	10.00	19.86	1	159
Firm age	192	18.98	17.00	11.98	3.00	106.00
Innovativeness–Proactiveness	192	3.49	3.50	.79	1.17	5.00
Risk taking	192	2.95	3.00	.83	1.00	4.67
EO combined	192	3.31	3.44	.69	1.44	4.89
Growth orientation	193	3.53	3.67	.87	1.00	5.00
Growth 1 year	190	.16	.11	.46	–1.00	4.87
Growth 5 years average	192	.24	.10	.87	–.30	10.81
ROA 1 year	193	.19	.15	.13	–.16	.69
ROA 5 years average	192	.16	.15	.19	–1.95	.61
RO-04	170	.15	.16	.21	–1.37	.80
ROA-05	178	.18	.14	.18	–.22	1.06
ROA-06	186	.19	.16	.17	–.18	1.05
ROA-07	191	.22	.18	.14	.03	.74
ROA mean 04–07	191	.19	.16	.13	–.13	.64
ROA std. deviation 04–07	186	.01	.07	.10	.00	.91
ROA coefficient of variation 04–07	186	1.08	.47	3.75	.01	44.82

Table 3
Linear regression results, profitability as the dependent variable.

	ROA		ROA 5 year average	
	b	t	b	t
(Constant)	.35***	4.56	.30***	4.73
LN_age	–.03*	–1.77	–.028*	–1.94
LN_employees	–.02*	–1.76	–.02**	–2.23
EO	–.01	–.52	–.00	–.09
Model fit	R square	F	R square	F
	.04	2.14*	.05	2.84**

*** $p < 0.01$.

** $p < 0.05$.

* $p < 0.1$.

value of innovativeness and proactiveness. The median growth percentages were around 10% over the last year and also as a five-year average. However the variation was large, ranging from 100% decline over the last year to 487% increase. The overall level of profitability in the sample was very good, as the average return on assets was 19% last year and 16% over the past five years. All the profitability indicators were rather symmetrically distributed around their mean, although there were a couple of small and large outliers in the sample.

The hypotheses were tested using multiple linear regression analysis and two-way analysis of variance. The basic assumptions of ordinary least squares estimation were checked by analyzing the residuals and tolerance values, and no violations were detected.

In order to test our first hypothesis the following regression equation is estimated:

$$Profitability_i = \alpha_0 + \beta_1(LN_age_i) + \beta_2(LN_employees_i) + \beta_3(EO_i) + e_i, \quad (2)$$

where $Profitability_i$ denotes the profitability measure ($Profitability_1$: 1 year return on assets, $Profitability_2$: 5 year average return on assets). Terms LN_age_i and $LN_employees_i$ are the natural logarithms of firm age and number of employees used as a control variables and EO_i represents the level of firm's entrepreneurial orientation. The results for our first hypothesis regarding the effect of EO on profitability are in Table 3. While the linear regression model for the average profitability indicator is statistically significant at the 5% level, the coefficients of determination

Table 4
Linear regression results, growth as the dependent variable.

	Growth % 1 year		Growth % 5 years average		GO	
	b	t	b	t	b	t
(Constant)	.26	1.45	.135	1.14	1.31***	2.89
LN_age	–.11***	–2.74	–.07**	–2.49	.03	.27
LN_employees	.03	1.38	–.03	–1.45	.14**	2.20
EO	.04	.99	.08***	3.32	.54***	5.94
Model fit	R square	F	R square	F	R square	F
	.07	3.90***	.11	6.47***	.230	15.02**

*** $p < 0.01$.

** $p < 0.05$.

* $p < 0.1$.

is only 5%, implying a poor fit. Furthermore, only the control variables age and size have significant effects. Older firms have lower profitability, and the return on assets is lower in larger companies. In sum, hypothesis H1 fails to receive any support from our empirical data.

In order to examine the effects of entrepreneurial orientation on growth the following regression equation is estimated:

$$Growth_i = \alpha_0 + \beta_1(LN_age_i) + \beta_2(LN_employees_i) + \beta_3(EO_i) + e_i, \quad (3)$$

where $Growth_i$ denotes the growth measure ($Growth_1$: 1 year growth %, $Growth_2$: 5 year growth %, $Growth_3$: growth orientation). Terms LN_age_i and $LN_employees_i$ are the natural logarithms of firm age and number of employees used as a control variables and EO_i represents the level of firm's entrepreneurial orientation. Results of the regressions are reported in Table 4.

The model fit statistics indicate that all the models are statistically significant, R squares ranging from 7% for one-year growth to 23% for growth orientation. Entrepreneurial orientation has a strong positive effect on future growth aspirations and also a weaker positive, statistically significant effect on actual growth in the past five years. Thus our hypothesis H2 is supported. It is also interesting to note the different effects of age and size: while age has a negative effect on actual growth, size in turn is only a positive determinant of growth orientation in the future. We also tested the five year employee growth rate in our model as an indicator for growth, but the results were insignificant and the model fit was very low.

Table 5
GLM results, risk taking as the dependent variable.

Source	Type III SS	Estimate	t	F	Sig.	Partial eta squared
Corrected model	16.93			1.74	.05	.13
Intercept	500.87			774.11	<.00	.82
ROA level	8.39			4.32	.01	.07
< 5		-1.17	-2.25		.03	.03
5–15		-1.56	-2.96		<.00	.05
15–30		-1.41	-2.55		.01	.04
> 30		n.a.				
ROA variation	5.82			3.00	.03	.05
< .20		-1.34	-2.56		.01	.04
.20–.50		-1.50	-2.89		<.00	.05
.50–1		-.89	-1.51		.13	.01
> 1		n.a.				
ROA level × ROA variation	14.11			2.42	.01	.11
Error	109.35	169	.65			
Total	1727.90	185				
Corrected total	126.27	184				

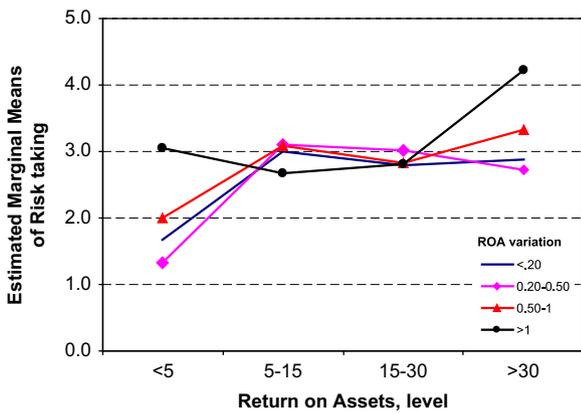


Fig. 1. Relationship between risk taking and profitability.

The third hypothesis was tested with two-way analysis of variance using the general linear model procedure, see Table 5. The average level of ROA over past four years was the first factor in the analysis, and it was recorded into four levels. The second factor was the coefficient of variation over the same four year time period, and it also had four levels.

The results indicate that both factors have statistically significant main effects, and also a significant interaction, together explaining 13.4% of the variance. The main effects indicate that the risk taking is highest among those firms which have the highest profitability, and the risk taking is also highest in the group where the ROA variation is the highest. Since, the interaction term (ROA level × ROA variation) is significant we cannot draw more conclusion based on the main effects, rather we have to focus on the interaction effect. The nature of the interaction effect is illustrated in Fig. 1.

First of all, the level of ROA seems to have a nonlinear almost an inverse U-shaped relationship with risk taking as the highest levels of risk taking are observed in the medium profitability categories. Secondly, the relationship between the risk taking and profitability is remarkably different when there is more year-to-year variation in ROA, i.e. firm is riskier measured by accounting

figures. In this group the relationship is U-shaped, meaning that the levels of strategic risk taking are at the highest in the categories of the most and the least profitable firms. The level of risk taking is remarkably high in the category of the most profitable firms. This implies that there is a positive relationship between risk and profitability, as the finance theory postulates. Also, if we ignore the category of the least profitable firms the level of risk taking is increasing when the profitability is increasing this finding is also confirming the positive relationship between risk and profitability. Thus, our H3 is supported by the empirical findings.

5. Conclusion

Entrepreneurial orientation capturing such characteristics as innovativeness, risk-taking and proactivity has become a very popular concept that has received substantial conceptual and empirical attention in modern entrepreneurship research. In our view, EO also builds a bridge between empirical entrepreneurial research and modern strategic management, since one can also regard EO as an operationalization of the main characteristics of dynamic capabilities of the firm, such as sensing weak signals and seizing the opportunities by investments (Teece, 2007). Highly importantly, our paper further relates strategic management scientific area to the area of finance by discovering a relationship between strategic risk taking and levels of financial profitability. From this perspective, it is natural to assume that EO is able to capture some important aspects from entrepreneurial behavior thus having a positive influence on firm profitability and growth rate as well. These relationships have been widely recognized in many empirical studies. Some researchers even think that the EO is a key ingredient for firm success. In our empirical study we focused on entrepreneurial orientation in order to analyze to what extent it influences on firms' growth rate and to the level and variability of profitability in the context of Finnish SMEs. Our approach to the EO–performance relation differs from the prior EO literature in one important aspect, since we separately assessed the influence of EO on profitability and on growth. Moreover, we relate EO as internal risk measure to measure realized level and variation of firm profitability. The rationale behind this reasoning is the fact that when one is measuring growth and profitability from the firm's financial statements, one can easily note that these two dimensions can be contradictory as well. Hence, a new approach is needed. Moreover, these dimensions of performance are analyzed separately to be able to conclude if risk taken, measured as EO, is resulting SMEs to provide higher returns for investors.

Our first hypothesis links entrepreneurial orientation with profitability. In this case, our results do not support the assumption that entrepreneurial orientation is positively related to profitability of small firms. In our empirical findings EO did not have significant effect on any of our three profitability measures. Therefore, our results are inconsistent with the results of prior literature supporting EO as affecting positively the firm profitability (e.g. Kemelgor, 2002). When testing the first hypothesis, we used only profitability figures based on archival data whereas in prior literature performance indicator has typically been a combination of profitability, growth, and other performance related measures, both subjective and objective (Zahra and Covin, 1995; Lumpkin and Dess, 1996; Wang, 2008).

The empirical findings of this study support our second hypothesis, which stated that there is a positive relationship between the entrepreneurial orientation of the firm and the firm's rate of growth. Our results revealed that EO has a strong and significant effect on the firm's growth orientation. Very importantly, our study

also shows that there exists a significant and positive effect on actual sales growth rate of the past five years. Our results hence give support to the anticipation that entrepreneurial orientation is fundamentally pursuing actual growth for firms. When thinking about the ability to overcome recession this result tells us that the more there are SME's with strong entrepreneurial orientation characteristics the better are the chances to get out of the downturn and vice versa.

In light of our results, one could reason that the positive relationship between EO and firm performance, found in prior literature, is primarily caused by the growth factor. From the “how to overcome recession” perspective relevant in this article this result implies that it is more important to promote the rapid, employment enhancing growth of the SMEs than to improve their profitability. This “Keynesian view” should be taken seriously when the government is creating incentives for the SMEs during the recession. However, in the longer run, the government should, of course, create incentives for the profitable growth by promoting entrepreneurship that makes it possible to achieve and sustain competitive advantage. From this longer run perspective our results indicate that the weak results with respect to EO&profitability are mainly driven by risk involved during the recession. This relationship is tested in the third hypothesis.

As for our third hypothesis, the empirical results obtained provide very interesting results concerning the EO dimensions and firm risk. Our results show that the firm's risk-taking orientation is significantly positively related to higher variability in profitability. Moreover, the interaction of risk taking and profitability indicates that the firms with higher risk-taking profile end up to the higher level of actual measured profitability. This in turn indicates that risk-taking orientation of firms actually generates higher profitability for firms as well. This finding significantly also indicates that for the SMEs the CAPM relation holds. To conclude, the results of this paper indicate that political decision makers responsible for economic policy should seriously consider how to create stronger incentives to support SMEs that conduct growth actions with high entrepreneurial orientation characteristics.

Nonetheless, our research does have some limitations. First, the models used in this research are somewhat simple, we believe it may be important to consider additional variables, such as those related to the industry and to the firm's financial resources, to be better able to capture the relationship between the EO and the various dimensions of performance. Secondly, a longitudinal design – rather than the current cross-sectional design – would give us a better premiss to explore the causal relationships among the research variables. Repeating our survey in the future will mitigate this problem.

Future research on the construct of EO might lead us to explore the relationship between the EO and how severe global economic conditions, such as the latest economic crisis, are affecting SMEs at the operational level, e.g. whether they have to lay off employees or delay investments, etc.

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ARTICLE II

Soininen, J., Puumalainen, K., Sjögrén, H. and Syrjä, P. (2012).

**THE IMPACT OF GLOBAL ECONOMIC CRISIS ON SMES – DOES
ENTREPRENEURIAL ORIENTATION MATTER?**

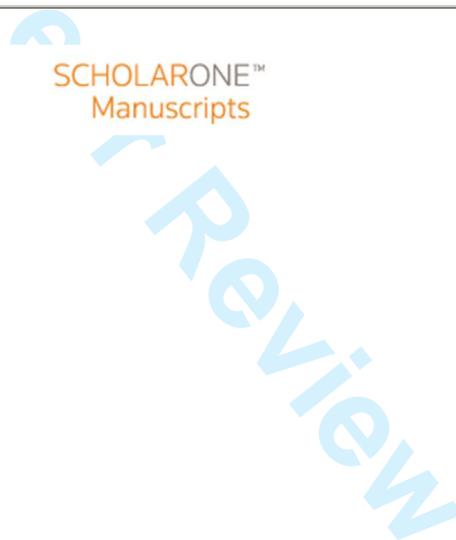
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The impact of global economic crisis on SMEs – does entrepreneurial orientation matter?

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The impact of global economic crisis on SMEs – does entrepreneurial orientation matter?

1. Introduction

Between late 2007 and the second quarter of 2009, the global economy slid into a severe economic crisis (Naidoo, 2010). This global economic crisis has not only been severe for large enterprises, but also for small and medium-sized enterprises (SMEs), which have become an increasingly important component of economic development (Paul, Whittam & Wyper, 2007). The international financial crisis caused an economic downturn in Finland, too. For instance, since the last quarter of 2008 the number of layoffs, order cancellations and financial difficulties has increased drastically, which has led among others to a 30 per cent increase in the number of bankruptcies among the Finnish SMEs. This recent sudden and extraordinary decline has shown how turbulent and vulnerable the international and also the national business environment can nowadays be. Theory and empirical evidence suggest that major economic crises have profound effects on firms, but the effects are uneven between firms (Narjoko & Hill, 2007). In this framework it is essential to further investigate if there are some firm-specific strategic factors that enable SMEs to better survive such challenging changes in the surrounding environment. For decades economic recessions and firms in these harsh environments have offered researchers a fruitful setting. A sizeable body of literature called the turnaround strategy literature (e.g. Pearce II & Robbins, 1994; Laitinen, 2000; Cater & Schwab, 2008; Naidoo, 2010) has focused on the strategies used by firms to survive and meet the performance targets during recessionary periods. Some of these turnaround strategies resemble very closely the dimensions of the entrepreneurial orientation, and we are therefore interested to see if the entrepreneurial orientation has a positive effect on firms struggling to survive the recession.

During the last few decades, entrepreneurial orientation (EO) has emerged as a major construct within the strategic management and entrepreneurship literature. Covin, Green & Slevin (2006) define EO as a strategic construct whose conceptual domain includes certain firm-level outcomes and management-related preferences, beliefs, and behaviors as expressed among a firm's top-level managers. Runyan, Droge & Swinney (2008) argue that EO is evidenced through visible entrepreneurial tendencies toward innovativeness, proactiveness and risk taking. Miller (1983) and later on Covin & Slevin (1989) operationalized these constructs and see them as central to EO. According to Rauch et al. (2009) these dimensions of EO can be defined as follows: *Innovativeness* represents creativity and experimentation through the introduction of new products/services as well as technological leadership via R&D in new processes. *Risk taking* describes the nature of easily venturing into the unknown, borrowing heavily, and/or committing remarkable resources to ventures in uncertain environments. *Proactiveness* is an opportunity-seeking, forward-looking perspective characterized by the introduction of new products and services ahead of competition and acting in anticipation of the future demand.

In recent years there has been an increased focus on the relationship between a firm's strategic orientation and firm performance (Madsen, 2007). Earlier studies have generally found a positive relationship between EO and firm performance (Madsen, 2007; Wiklund & Shepherd, 2005; Jantunen et al, 2005). However, there are also studies where no such relationship has been found (Smart & Conant, 1994). Typically, the measure that has been used to assess firm performance has been a combination of both profitability measures and growth measures (Avlonitis & Salavou, 2007; Wiklund, 1999; Covin & Slevin, 1989). There are also a few studies that have merely explored the relationship between EO and firm growth

(Moreno & Casillas, 2008; Covin, Green & Slevin, 2006). The findings of these studies have confirmed that there is a positive relationship between EO and the firm's rate of growth.

The purpose of this study is to ascertain if EO can mitigate the negative effects of economic crisis both on firm's operations and on firm's financial performance. This study contributes to the EO literature in two ways: first, as far as we know, this is the first work to link EO with the effects of recession at the firm's operational level. Secondly, as discussed in the paragraph above, the relationship between EO and performance is well known, but we expand this knowledge by taking the EO-performance relationship into the context of recession.

The article is structured as follows: After the introductory section is a section that defines the concept, reviews the relevant literature and presents the research hypotheses. Then comes a description of the methodology used in empirical research. In the following section, the main findings are presented. Finally, section five summarizes the results along with their implications.

2. *Theoretical Framework and Hypotheses*

A substantial amount of research has examined the concept of entrepreneurial orientation (EO) thus it has become a central concept in the domain of entrepreneurship (Covin, Green & Slevin, 2006). Rauch et al. (2009) point out in their meta-analysis that more than 100 studies dealing with EO have been conducted, which has led to a wide acceptance of the conceptual meaning and relevance of the concept.

The Dimensions of EO

Miller (1983) conceptualized the three focal dimensions of EO as *innovativeness*, *risk taking and proactiveness* and these three dimensions have since been used consistently in the literature (Dimitratos et al., 2004; Kemelgor, 2002). Lumpkin and Dess (1996) describe innovativeness as follows: Innovativeness reflects a firm's tendency to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products, services, or technological processes. Innovativeness represents a basic willingness to depart from existing technologies or practices and venture beyond the current state of the art. Lumpkin and Dess (1996) see innovativeness as an important component of an EO, because it reflects an important means by which firms pursue new opportunities. According to Baird and Thomas (1985) there are three different types of strategic risk taking, such as venturing into the unknown, heavy borrowing, and/or committing large portions of corporate assets in uncertain environments. Similarly, Lumpkin and Dess (1996) state that firms with an entrepreneurial orientation are often typified by risk-taking behavior, such as incurring heavy debts or making significant resource commitments in the interests of obtaining high returns by seizing opportunities in the marketplace. Rauch et al., (2009) describe proactiveness as an opportunity-seeking, forward-looking perspective characterized by the introduction of new services and products ahead of the competition and acting in anticipation of future demand.

Besides these three most commonly used dimensions Lumpkin and Dess (1996) argue that two additional dimensions, *competitive aggressiveness* and *autonomy*, are also salient components of EO. Lumpkin and Dess (2001) define these two additional dimensions as follows: Competitive aggressiveness is said to reflect the intensity of a firm's effort to outperform industry rivals, characterized by a strong offensive posture and a forceful response to competitor's actions. Autonomy is independent action by an individual or team aimed at bringing forth a business concept or vision and carrying it through to completion.

The usage of the EO model with all the aforementioned five dimensions has been rare in the EO literature when compared with the use of the model with three dimensions. Rauch et al. (2009) show in their meta-analysis that only in one study (George et al., 2001) has been

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3 used all these five dimensions. Whereas, in 29 studies (e.g. Covin, Prescott & Slevin, 1990;
4 Covin et al., 1994; Slater & Narver, 2000; Bhuian et al., 2003; Wiklund & Shepherd 2003)
5 have been used these same three dimension as we are using in our study.

6 Rauch et al. (2009) state that the focal dimensions of EO are usually highly
7 intercorrelated with each other, which leads to combining these dimensions into one single
8 factor. In the EO literature there is no solid consensus on the dimensionality of the EO
9 construct. On the one hand, scholars such as Covin & Slevin (1989) argue that the EO
10 construct is best viewed as a unidimensional concept and on the other hand, for example,
11 Lumpkin and Dess (2001) suggest that the dimensions of EO may relate differently to firm
12 performance. In this study we use the latter approach, allowing the dimensions of EO to have
13 different effects on the firm's operations and financial performance during economic
14 downturn.
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17 **The EO-Performance Relationship**

18 The modern business environment is one in which the pace of change is fast and product
19 and business model lifecycles are shortened, the future profit streams from existing
20 operations are uncertain and businesses need to constantly seek out new opportunities.
21 Therefore firms may benefit from adopting an EO (Rauch et al., 2009). Wiklund (1999)
22 relates the positive influence of EO on performance to the first-mover advantages and the
23 tendency to take advantage of emerging opportunities implied by EO. Zahra and Covin
24 (1995) argue that firms with EO can "skim" the markets ahead of their competitors by
25 targeting premium market segments and charging high prices. Wiklund (1999) points out that
26 these firms monitor market changes and respond rapidly, thus capitalizing on emerging
27 opportunities. Innovation keeps them ahead of their competitors, gaining a competitive
28 advantage that leads to improved financial results. Proactiveness gives firms the capability to
29 present new products or services to the market before their competitors, which also gives
30 them a competitive advantage. Furthermore, Wiklund (1999) also states that there is a reason
31 to believe that the relation between EO and performance may be especially strong in the
32 context of small firms. Most likely, smallness *per se* enhances flexibility and innovation but
33 limits competitiveness in other strategic dimensions.
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36 Moreno and Casillas (2008) point out that the fairly extensive body of literature on the
37 relationship between EO and firm performance is dominated by two types of work. Firstly,
38 there are studies that present general models describing the characteristic of the said
39 relationship, identifying the moderating and mediating variables and striving to establish
40 wide-ranging propositions (Stam & Elfring, 2008; Marino et al., 2002; Covin & Slevin,
41 1991). Secondly, as Moreno and Casillas (2008) note, a wide range of studies have attempted
42 to empirically verify partial models of said relation. This field of research contains, in an
43 isolated and independent manner, some of moderating variables, those related either to
44 environment (Tan & Tan, 2005) or to the firm's internal dimensions (Wang, 2008).
45

46 Several empirical studies have found that firms with high EO perform better than firms
47 with low EO, for example Keh, Ngyuen & Hg (2007) found that EO plays an important role
48 in enhancing firm performance. Similarly, Wiklund and Shepherd (2003) found a strong
49 correlation between EO and performance, whereas Wiklund (1999) showed that investments
50 in EO may be worthwhile for small firms since there is a positive relationship between EO
51 and performance and the relationship actually increases over time. On the other hand, some
52 studies have shown that the relationship between EO and performance is not so
53 straightforward. Bhuian et al. (2005) found that entrepreneurship is one of the key elements
54 in organizational success, but the relationship is shaped like an inverted U, meaning that a
55 high degree of entrepreneurship is not always desirable in certain market and structural
56 conditions. Similarly, Tang et al. (2008) found a curvilinear relationship between EO and
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3 firm performance in Chinese firms, implying that blindly striving to pursue as high EO as
4 possible may under some conditions lead to adverse outcomes. Besides the relationship
5 between EO and financial performance some studies have found that EO also has a positive
6 influence on new product development, product innovativeness, and number of patents
7 (Avlonitis & Salavou, 2007; Friskhammar & Hörte, 2007; Kemelgor, 2002).

8
9 The literature shows that the variety of measures that have been used to assess firm
10 performance has been fairly diverse. Several studies (Runyan, Droge & Swinney, 2008;
11 Madsen, 2007; Lumpkin & Dess, 2001; Wiklund & Shepherd, 2003) have used perceived
12 performance indicators to assess firm performance. The items used to form the performance
13 indicator were typically based on the manager's subjective views about the firm's
14 profitability, growth, market share in relation to its main competitors. On the other hand,
15 some studies (Covin, Green & Slevin, 2006; Zahra & Garvis, 2000) have utilized secondary
16 data to capture both the growth and profitability dimension of company financial
17 performance. For example, Zahra & Covin (1995) combined measures of return on assets
18 (ROA), return on sales (ROS) and growth into a single performance indicator. Non-financial
19 data can also be used in entrepreneurship research to assess the perceptions of the SME's
20 management regarding the performance of the firm because of a strong correlation between
21 financial and non-financial data (Covin, 1991). However, this kind of an approach has been
22 used somewhat infrequently in the literature (Rauch et al., 2009). One common factor for the
23 performance indicators based either on perceived data or secondary data is the fact that in
24 both cases the indicator contains growth measures and profitability measures. According to
25 Moreno and Casillas (2008) such an approach may not be the most suitable because growth
26 dimension and profitability dimension are sometimes contradictory and should therefore not
27 be combined into one single indicator.

28
29 As mentioned earlier, Lumpkin and Dess (2001) suggest that the dimensions of EO may
30 relate differently to firm performance. Therefore, in the context of the recession, we
31 hypothesize as follows:
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34 **H1a:** The more innovative and proactive firm is, the less its financial
35 performance will be affected by the crisis

36 **H1b:** The more risk-taking firm is, the more its financial performance will be
37 affected by the crisis.
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39 **Turnaround Strategies**

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41 Carter and Schwab (2008) define turnaround strategies as a set of consequential,
42 directive long-term decisions and actions targeted at the reversal of a perceived crisis that
43 threatens the firm's survival. Moreover, Laitinen (2000) carries the definition further as
44 defining a turnaround strategy as a strategy that companies apply when responding to
45 uncertainty and changes in the environment and attempting to turn threats into opportunities
46 during a deep recession.

47
48 Pearce II & Robbins (1994) argue that firms in economic distress may undertake
49 recovery implementing recovery strategies, which are identified as primarily entrepreneurial-
50 oriented, primarily efficiency-oriented, or a combination of both. Pearce II & Robbins (1994)
51 characterize the difference between these two strategies as follows: Entrepreneurial recovery
52 strategies involve actions to "do things differently" whereas efficiency recovery strategies
53 entail actions designed to "do basically the same things on a smaller, more efficient scale".
54 These entrepreneurial recovery strategies come close to the innovation dimension of EO,
55 since they involve reformulations of firm's products, services, markets, or principal
56 technologies in ways that represent a new or radically altered competitive posture. The
57 findings of Pearce II & Robbins indicate that firms that experienced external cause downturns
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3 were more successful in their turnaround efforts when they emphasized entrepreneurial
4 activities in the recovery response. Furthermore, Pearce II & Michael (2006) also show that
5 innovative firms which introduce new products especially during a recession can be very
6 successful.

7
8 Features similar to the proactiveness component of the EO have also been beneficial for
9 companies struggling with unfavorable economic conditions. Laitinen (2000) notes that
10 companies that have been in decline have managed a sharp and sustained recovery by
11 constantly monitoring their environment, seeking opportunities and making improvements.

12 Therefore, we hypothesize the following:

13
14 **H2a:** The more innovative and proactive firm is, the less its operations will be
15 affected by the crisis.

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17 The risk taking component of EO is characterized by committing a large amount of
18 resources to uncertain ventures and borrowing heavily. In uncertain and recessionary periods
19 such behavior may be detrimental to the companies. Geroski & Gregg (1996) studied the
20 effects of recession on firms in the UK. They showed that firms which were extremely
21 severely affected by the recession were firms which had higher ratios of debt to assets than
22 firms which were less severely affected by the recession. Similarly, Ofek (1993) showed that
23 highly-leveraged firms responded faster than their less-leveraged counterparts to financial
24 distress. The highly-leveraged firms took actions such as laying off employees and cutting
25 dividends. Keeping the heavy borrowing nature of the risk taking component in mind, we
26 hypothesize the following:

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29 **H2b:** The more risk-taking firm is, the more its operations will be affected by
30 a crisis.

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35 **3. Research Method**
36 **Sample and Data Collection**

37 The empirical data used to test the hypotheses were drawn from a mail survey conducted
38 in spring 2009 by means of a structured questionnaire. The initial population consisted of
39 Finnish small private limited companies (they typically have few shareholders and are usually
40 owner-managed family businesses) with a sales turnover between one and 10 million Euros.
41 Hypotheses were tested in a multiple industry setting, because of a greater generalizability. A
42 total of 13,495 firms were identified from the Voitto+- database, and a systematic random
43 sample of 1,026 firms was drawn. The pre-tested survey questionnaire with an introductory
44 cover letter was mailed to the respondents, who were assured of confidentiality and promised
45 a summary of the results. A reminder was sent to those who had not responded within two
46 weeks. Final responses were received from 194 companies, yielding a satisfactory effective
47 response rate of 18.9 percent (194/1,026). It was possible to obtain financial information
48 about the companies via Voitto+ database, a commercial database containing financial
49 statements of over 82,000 Finnish firms. The financial measures used in this study are based
50 on the financial statements of 2009. Non-response bias was checked on a number of key
51 variables by comparing the early (first-round) respondents with the late respondents
52 (following the suggestions of Armstrong and Overton, 1977) and no significant differences
53 were found between these two groups.

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57 **Measures**
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We utilize nine items to capture the three dimensions of EO conceptualized by Miller (1983). The items are based on the work of Covin and Slevin (1990). However, they were slightly adapted to fit better with the context of Finnish small enterprises. A principal component analysis of the EO items (see Table 1) resulted in two components explaining together 61% of the variance in the items. The items measuring innovativeness and proactiveness merged into the first component, while risk-taking items loaded highly on the second component. The internal consistency of the scales was good, as the Cronbach's alpha values were .865 for innovativeness/proactiveness and .671 for risk-taking respectively.

Table 1.
Principal Component Loadings of the EO Items

Item	Innovativeness & Proactiveness	Risk taking	Communality
Continuous renewal and innovation are important for our company (I)	.81	.24	.71
We invest heavily in developing new (I) products, services and business practices.	.81	.17	.68
In our company, new ideas come up all the time. (I)	.79	.12	.64
We aim at being at the forefront of development in our business sector. (P)	.76	.22	.63
Lately we have launched many new products/ services.(I)	.73	.14	.55
Our company often acts before the competitors do.(P)	.63	.19	.43
In uncertain situations we are not afraid to take substantial risks.(R)	.20	.82	.68
Bold action is necessary to achieve our company's objectives. (R)	.32	.74	.64
We prefer the cautious line of action even if some opportunity might be lost that way. (R, Reversed)	-.19	-.69	.52
Eigenvalue	4.22	1.25	
Cum % of variance	46.90	60.80	

Principal Component Analysis with Varimax rotation. KMO measure of sampling adequacy = .846, Bartlett Chi Square= 686 with 36 d.f., $p=.000$, MSA for individual items ranged from .73 to .93. I= innovativeness, P= proactiveness, R=risk taking

The items of different operations were adapted from scales used by Geroski and Gregg (1993). They found that some firms were more severely affected by the recession than others. They also identified the parts of operations which were most affected. Their survey contained 32 detailed questions. The questions were divided into three main sections: "the effects of the recession", "human resource management" and "company organization". The aim was to ascertain how severely the firms were affected by the recession; how much the recession affected their trading position, pay arrangements, their workforce composition and their potential for financing (credit limits by banks). In our questionnaire some of the original items were omitted as they were not deemed suitable for small Finnish firms. The final measure included 20 items all assessed on a five-point Likert scale with the anchors 1 = totally disagree, 5 = totally agree, see Table 2 for exact item wordings and factor analysis results.

In a principal component analysis we were able to identify six dimensions explaining 64 percent of total variance. The dimensions were 1) impact on sales and profitability (4 items), 2) impact on short-term financing (5 items), 3) impact on long-term financing (3 items), 4) impact on personnel (2 items), 5) impact on the competitive situation (3 items) and 6) impact on payment terms (3 items). We computed the mean score of items to represent each of the

six dimensions, and additionally a total summed score of all 20 items to represent the perceived total impact of the economic downturn.

Table 2.
Principal Component Loadings of the Effects of Economic Downturn

Item	Component					
	1	2	3	4	5	6
The downturn has decreased our sales	.85			.11		
The downturn has decreased our profitability	.84		.15		.17	
The crisis makes our operations harder overall	.74	.23		.14		.16
Customers have canceled their orders	.44			.30	.34	.22
We have not been able to pay dividends		.77			.18	.11
We have cut down the principal owner's salary	.12	.66	.14	.22		
It has been hard to get financing	.12	.66	.41			
Lack of financing jeopardizes our future	.17	.64	.54			
The crisis increases the risk of bankruptcy	.40	.61	.34			
We have canceled investments due to lack of financing	.14	.25	.79			.17
We have delayed our investments	.14	.14	.72	.30		
Our interest margin has been raised		.15	.60	-.23	.28	
We have dismissed personnel			.12	.82	.12	
We have laid off personnel	.23	.16		.79		
We have outsourced our operations	-.16	.31			.73	
We've had to lower prices	.38	-.13	.13		.70	.13
Competition has become more aggressive	.26			.16	.58	.27
Our customers' terms of payment have become longer				.10		.84
Our credit losses have increased	.18	.16		-.18		.73
Our suppliers have tightened their payment terms	-.16	.13	.41	.12	.18	.46
Eigenvalue	5.04	2.49	1.75	1.34	1.10	1.06
Cum % of variance	25.19	37.65	46.42	53.11	58.63	63.93

Extraction Method: Principal Component Analysis, Rotation Method: Varimax with Kaiser Normalization, Rotation converged in 9 iterations,

The measures for financial performance were obtained from the Amadeus database. We included financial measures representing scale, liquidity, and profitability over the three-year period from 2007 to 2009, which was the most recent year available for the majority of the companies at the time of the study. The scale of the company was measured by the number of employees, operating revenue in thousands of Euros, and total assets in thousands of Euros. The liquidity measure was current ratio, and profitability measures included return on total assets as a percentage, and profit margin percentage.

4. Results

The descriptive information of our key variables in the sample is shown in Table 3. The average size of the respondent companies was about 2.3 million Euros in sales turnover and

18 employees. The largest companies had about 13 million Euro turnover and 150 employees. The ages of the companies varied from three to more than a hundred years, with an average of about 19 years.

The distributions of the two dimensions of entrepreneurial orientation were normally distributed with a mean value close to the midpoint of the scale. The average risk taking propensity was slightly lower than the mean value of innovativeness and proactiveness. The perceived impacts of the economic downturn at the time of the study were highest in terms of sales and profitability, followed by more aggressive competition and less favorable terms of payment. On the other hand, the respondents did not report many impacts on their financing opportunities or personnel. On average, the volume of the companies had increased from 2007 to 2008, but then decreased in 2009. The decrease was most dramatic in operating revenues as its average value in 2009 was 22 percent lower than the 2008 average. The number of employees and total assets decreased only 11 percent and 2.4 percent respectively. The liquidity as measured by current ratio had increased throughout the three-year period. Both the profitability ratios had decreased since 2007, and the drop from 2008 to 2009 was greater than that from 2007 to 2008.

Table 3.
Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Standard Deviation
Firm age	192	4.00	107.00	12.00	11.98
Sales (1000 €)	192	242.00	10803.40	2045.50	2049.83
Innovativeness-proactiveness	192	1.17	5.00	3.50	.79
Risk-taking	192	1.00	4.67	2.95	.83
International sales (percent)	185	.00	100.00	10.39	23.52
Impact on sales and profits	193	1.00	5.00	3.36	.97
Impact on short-term financing	190	1.00	5.00	1.74	.85
Impact on long-term financing	189	1.00	5.00	1.91	.94
Impact on personnel	190	1.00	5.00	1.92	1.26
Impact on competition	193	1.00	5.00	2.87	.98
Impact on terms of payment	192	1.00	4.67	2.57	.90
Overall impact	190	21.00	81.00	47.85	11.91
Operating revenue 2009 (1000€)	177	.00	12759.00	2349.78	2025.50
Operating revenue 2008 (1000€)	182	18.00	21889.31	3018.75	2783.04
Operating revenue 2007(1000€)	178	486.16	12630.56	2701.30	2052.52
Number of employees 2009	138	1.00	150.00	17.98	20.91
Number of employees 2008	130	1.00	186.00	20.25	27.49
Number of employees 2007	152	1.00	159.00	16.74	19.93
Total assets 2009 (1000€)	177	85.00	82202.76	2062.00	6374.26
Total assets 2008 (1000€)	182	121.00	73841.60	2112.91	5745.74
Total asset 2007 (1000€)	178	204.00	14221.56	1597.69	2085.69
Current ratio 2009	177	.06	82.24	4.16	8.04
Current ratio 2008	182	.08	42.72	3.16	4.01
Current ratio 2007	178	.28	20.94	2.78	2.83
Return on total assets 2009 (percent)	176	-83.72	59.21	8.94	18.14
Return on total assets 2008 (percent)	182	-36.00	71.46	15.13	15.69
Return on total assets 2007 (percent)	178	-2.83	64.84	19.63	13.54
Profit margin 2009 (percent)	174	-33.86	66.20	5.38	11.26
Profit margin 2008 (percent)	181	-41.44	61.29	7.91	10.77
Profit margin 2007 (percent)	178	-2.97	72.94	10.45	9.88

The first hypothesis concerned the effects of EO dimensions on financial performance. The results of multiple linear regressions with financial performance indicators as dependent variables are shown in Table 4. In these regression models we predict the financials of 2009 using the 2008 values as control variables and EO dimensions as independent variables. The models for the two volume indicators (operating revenue and total assets) give very similar results. The R squares are above .80, the lagged financial indicator has a positive coefficient with a very large t -value, and the innovativeness/proactiveness dimension has a significant positive effect while risk-taking is not significant. Thus the more innovative and proactive firms suffered less in terms of operations volume. The liquidity and profitability models are also significant but the R squares are somewhat lower than in the volume models. The profitability and liquidity measures are largely dependent on the previous year's values, but to a notably lesser extent than the volume measures. Risk-taking has negative effects which are significant or close to significance. This means that the more risk-taking a company is, the more its liquidity and profitability decreased during the crisis.

In sum, H1a is partly supported as innovativeness/proactiveness has positive effects on revenues and assets, but no effect on profitability or liquidity. H1b is partly supported as risk taking has no effect on revenues or assets, but has negative effects on liquidity and profitability.

Table 4
Regression Results for Financial Performance

Dependent variable: Operating revenue 2009 (thousand euros)				
Independent variables	Parameter estimate	Standard error	<i>t</i>-value	<i>p</i>-value
	<i>b</i>	of <i>b</i>		
Constant	-185.43	320.83	-.58	.56
Operating revenue 2008	.64***	.02	27.39	<.01
Innovativeness-proactiveness	153.33*	92.08	1.67	.09
Risk taking	24.86	85.42	.29	.77
<i>Model fit</i>	$R^2=.82$	$F=253.81$	$d.f.=3; 169$	$p=.00$
Dependent variable: Total assets 2009 (thousand euros)				
Independent variables	Parameter estimate	Standard error	<i>t</i>-value	<i>p</i>-value
	<i>b</i>	of <i>b</i>		
Constant	-290.00*	172.66	-1.68	.09
Total assets 2008	.904***	.02	54.69	<.01
Innovativeness-proactiveness	138.19***	50.31	2.75	<.01
Risk taking	-47.79	46.52	-1.03	.31
<i>Model fit</i>	$R^2=.95$	$F=1013.32$	$d.f.=3; 169$	$p<.01$
Dependent variable: Current ratio 2009				
Independent variables	Parameter estimate	Standard error	<i>t</i>-value	<i>p</i>-value
	<i>b</i>	of <i>b</i>		
Constant	1.56	1.93	.81	.42
Current ratio 2008	1.53***	.10	16.09	<.01
Innovativeness-proactiveness	.15	.57	.27	.79
Risk taking	-.94*	.52	-1.81	.07
<i>Model fit</i>	$R^2=.62$	$F=91.89$	$d.f.=3; 169$	$p<.01$
Dependent variable: Profit margin 2009 (%)				
Independent variables	Parameter estimate	Standard error	<i>t</i>-value	<i>p</i>-value
	<i>b</i>	of <i>b</i>		
Constant	9.01**	3.67	2.43	.02
Profit margin 2008	.46***	.08	5.93	<.01
Innovativeness-proactiveness	-.32	1.06	-.31	.76

Risk taking	-2.10**	.96	-2.18	.03
<i>Model fit</i>	$R^2=.21$	$F=15.10$	$d.f.=3; 166$	$p<.01$
Dependent variable: Return on total assets 2009 (%)				
Independent variables	Parameter estimate	Standard error of b	t-value	p-value
Constant	16.00**	6.95	2.30	.02
ROA 2008	.38***	.08	4.52	<.01
Innovativeness-proactiveness	-1.30	1.91	-.68	.49
Risk taking	-2.82	1.76	-1.61	.11
<i>Model fit</i>	$R^2=.150$	$F=9.87$	$d.f.=3; 168$	$p<.01$

*** $p<.01$, ** $p<.05$, * $p<.10$; Tolerance values for all independent variables $>.78$

According to Miller (2011) combining the dimensions of EO is warranted, especially when the components are correlating strongly, like in our case the components of innovativeness and proactiveness. On the other hand, some scholars (e.g. Knight, 1997; Antoncic & Hisric, 2001; Lumpkin & Dess, 2001) have shown that sometimes the dimensions of EO are distinct concepts and need to be treated separately. As there is no solid consensus in the prevailing EO literature how the EO dimensions should be treated, therefore, as a robustness check, we also treated innovativeness and proactiveness as separate independent variables. The scale for innovativeness consisted of four items (see Table 1) and its reliability was good (Cronbach alpha=.84). The proactiveness scale was formed as an average of two items and the reliability was acceptable (Cronbach alpha .64). The results (Table 5 model A) of this alternate model regarding the financial performance are very similar to the results presented here. In the alternate model innovativeness and proactiveness are highly correlated (tolerance values close to .50), which might cause collinearity problems with the parameter estimates. Hence, we also run the models by including only innovativeness or proactiveness (Table 5 models B and C). The results were highly similar to those obtained from the original model.

Table 5

Regression results for financial performance: Innovativeness and proactiveness as separate components

Dependent variable: Operating revenue 2009 (thousand euros)						
	Model A¹		Model B²		Model C²	
Independent variables	b (s.e.)	t (p)	b (s.e.)	t (p)	b (s.e.)	t (p)
Constant	-169.73	-.50	-115.92	-.39	-132.80	-.39
	341.57	.62	296.28	.69	340.12	.69
Op rev 2008	.64	26.86	.63	27.32	.64	27.18
	.02	<.01	.02	<.01	.02	<.01
Innovativeness	114.08	1.10	134.41	1.64		
	103.87	.27	81.84	.10		
Proactiveness	35.95	.32			111.78	1.26
	112.60	.75			89.00	.21
Risk taking	25.79	.30	31.18	.37	44.83	.53
	85.91	.764	84.00	.711	84.19	.59
<i>Model fit</i>	$R^2=.818$	$F=189.27***$	$R^2=.818$	$F=253.67***$	$R^2=.817$	$F=251.65***$
Dependent variable: Total assets 2009 (thousand euros)						
	Model A¹		Model B²		Model C²	
Independent variables	b (s.e.)	t (p)	b (s.e.)	t (p)	b (s.e.)	t (p)
Constant	-347.63	-1.90	-198.60	-1.24	-332.15	-1.83
	182.63	.059	160.67	.218	181.49	.06
Tot assets 2008	.91	53.84	.90	54.07	.91	55.00

	.02	<.01	.02	<.01	.02	<.01
Innovativeness	47.15	.83	106.69	2.36		
	57.14	.410	45.16	.019		
Proactiveness	103.22	1.69			134.46	2.8
	61.24	.094			48.09	<.01
Risk taking	-50.95	-1.09	-36.03	-.78	-43.19	-.95
	46.63	.276	46.04	.43	45.63	.34
<i>Model fit</i>	$R^2=.948$	$F=759.97^{***}$	$R^2=.947$	$F=1001.43^{***}$	$R^2=.947$	$F=1014.98^{***}$

Dependent variable: Current ratio 2009

	Model A ¹		Model B ²		Model C ²	
Independent variables	<i>b</i> (s.e.)	<i>t</i> (<i>p</i>)	<i>b</i> (s.e.)	<i>t</i> (<i>p</i>)	<i>b</i> (s.e.)	<i>t</i> (<i>p</i>)
Constant	1.40	.69	1.71	.95	1.39	.69
	2.03	.49	1.81	.34	2.00	.49
Current 2008	1.53	15.90	1.54	16.18	1.53	15.95
	.10	<.01	.10	<.01	.10	<.01
Innovativeness	-.04	-.06	.09	.18		
	.63	.95	.50	.85		
Proactiveness	.23	.33			.20	.38
	.68	.73			.54	.70
Risk taking	-.95	-1.82	-.92	-1.79	-.96	-1.88
	.53	.071	.51	.075	.51	.06
<i>Model fit</i>	$R^2=.620$	$F=68.56^{***}$	$R^2=.620$	$F=91.86^{***}$	$R^2=.620$	$F=91.95^{***}$

Dependent variable: Profit margin 2009 (%)

	Model A ¹		Model B ²		Model C ²	
Independent variables	<i>b</i> (s.e.)	<i>t</i> (<i>p</i>)	<i>b</i> (s.e.)	<i>t</i> (<i>p</i>)	<i>b</i> (s.e.)	<i>t</i> (<i>p</i>)
Constant	7.98	2.08	9.37	2.75	7.43	1.96
	3.84	.03	3.40	<.01	3.79	.05
Prof marg 2008	.45	5.85	.46	5.89	.46	5.99
	.08	<.01	.08	<.01	.08	<.01
Innovativeness	-1.04	-.90	-.51	-.54		
	1.16	.36	.94	.587		
Proactiveness	.98	.79			.32	.32
	1.25	.433			1.01	.75
Risk taking	-2.18	-2.25	-2.02	-2.14	-2.36	-2.51
	.97	.026	.94	.034	.94	.01
<i>Model fit</i>	$R^2=.218$	$F=11.52^{***}$	$R^2=.215$	$F=15.18^{***}$	$R^2=.214$	$F=15.10^{***}$

Dependent variable: Return on total assets 2009 (%)

	Model A ¹		Model B ²		Model C ²	
Independent variables	<i>b</i> (s.e.)	<i>t</i> (<i>p</i>)	<i>b</i> (s.e.)	<i>i</i> (<i>p</i>)	<i>b</i> (s.e.)	<i>t</i> (<i>p</i>)
Constant	15.12	2.09	15.86	2.45	14.20	1.99
	7.23	.038	6.48	.015	7.12	.05
ROA 2008	.38	4.49	.38	4.50	.39	4.63
	.08	<.01	.08	<.01	.08	<.01
Innovativeness	-1.62	-.76	-1.32	-.78		
	2.13	.44	1.70	.43		
Proactiveness	.53	.23			-.51	-.28
	2.27	.81			1.81	.78
Risk taking	-2.88	-1.63	-2.80	-1.62	-3.15	-1.82
	1.76	.10	1.73	.10	1.73	.07
<i>Model fit</i>	$R^2=.151$	$F=7.41^{***}$	$R^2=.150$	$F=9.92^{***}$	$R^2=.148$	$F=9.71^{***}$

¹ Tolerance values: innovativeness <.53, proactiveness <.54, other independent variables >.77² Tolerance values for all independent variables >.80

***the model is significant at .01 level,

Our second hypothesis concerned the effects of the dimensions of entrepreneurial orientation on the perceived impact that the economic downturn had on the operations of the firms. The effects were tested with a series of multiple linear regression analyses. In each regression model the perceived impact acted as the dependent variable, the international percentage of total sales as a control variable and the two EO dimensions as independent

variables. The results are shown in Table 6. For the overall impact of the economic downturn, the regression model is significant at the 5% level although the model only explains about 8 percent of the variance. International sales percentage is the most important predictor but risk-taking also has a positive coefficient significant at the 10% level. The findings imply that the more international and risk-taking a firm is, the harder the crisis has hit its operations. A closer examination of the six types of impacts reveals that the effect of internationalization is similar and statistically significant in all but financing impacts. The short and long term financing impacts are significantly predicted by risk-taking, rendering support for H2b, H2a is not supported as the innovativeness/proactiveness dimension of EO is not significantly related to any types of impacts on operations.

Table 6
Regression Results for Impact on Operations

Dependent variable: Overall impact				
Independent variables	Parameter estimate <i>b</i>	Standard error of <i>b</i>	<i>t</i>-value	<i>p</i>-value
Constant	45.70***	4.20	10.89	<.01
International sales %	.12***	.04	3.21	<.01
Innovativeness-proactiveness	-1.68	1.23	-1.36	.18
Risk taking	2.29**	1.17	1.96	.05
<i>Model fit</i>	$R^2=.08$	$F=5.03$	$d.f.=3; 178$	$p<.01$
Dependent variable: sales and profitability				
Independent variables	Parameter estimate <i>b</i>	Standard error of <i>b</i>	<i>t</i>-value	<i>p</i>-value
Constant	3.52**	.34	10.33	<.01
International sales %	.01**	.00	3.82	<.01
Innovativeness-proactiveness	-.05	.10	-.49	.63
Risk taking	-.04	.10	-.39	.70
<i>Model fit</i>	$R^2=.08$	$F=4.86$	$d.f.=3; 180$	$p<.01$
Dependent variable: short term financing				
Independent variables	Parameter estimate <i>b</i>	Standard error of <i>b</i>	<i>t</i>-value	<i>p</i>-value
Constant	1.47***	.30	4.85	<.01
International sales %	-.00	.00	-.02	.96
Innovativeness-proactiveness	-.16*	.09	-1.82	.07
Risk taking	.28***	.09	3.34	<.01
<i>Model fit</i>	$R^2=.06$	$F=3.77$	$d.f.=3; 178$	$p=.01$
Dependent variable: long term financing				
Independent variables	Parameter estimate <i>b</i>	Standard error of <i>b</i>	<i>t</i>-value	<i>p</i>-value
Constant	1.69***	.34	4.97	<.01
International sales %	.00	.00	1.32	.19
Innovativeness-proactiveness	-.14	.10	-1.35	.18
Risk taking	.22**	.10	2.32	.02
<i>Model fit</i>	$R^2=.04$	$F=2.53$	$d.f.=3; 177$	$p=.06$
Dependent variable: personnel				
Independent variables	Parameter estimate <i>b</i>	Standard error of <i>b</i>	<i>t</i>-value	<i>p</i>-value
Constant	1.97***	.45	4.38	<.01
International sales %	.01***	.00	2.71	<.01
Innovativeness-proactiveness	-.16	.13	-1.21	.23

proactiveness				
Risk taking	.14	.13	1.08	.28
<i>Model fit</i>	$R^2=.05$	$F=3.02$	$d.f.=3; 178$	$p=.03$
Dependent variable: competition				
Independent variables	Parameter estimate <i>b</i>	Standard error of <i>b</i>	<i>t</i>-value	<i>p</i>-value
Constant	2.58***	.35	7.33	<.01
International sales %	.01**	.00	2.23	.03
Innovativeness-proactiveness	.06	.10	.60	.55
Risk taking	.00	.10	.02	.99
<i>Model fit</i>	$R^2=.03$	$F=2.04$	$d.f.=3; 180$	$p=.11$
Dependent variable: terms of payment				
Independent variables	Parameter estimate <i>b</i>	Standard error of <i>b</i>	<i>t</i>-value	<i>p</i>-value
Constant	2.37***	.32	7.31	<.01
International sales %	.01**	.00	2.37	.02
Innovativeness-proactiveness	.06	.10	.62	.54
Risk taking	-.03	.09	-.28	.78
<i>Model fit</i>	$R^2=.04$	$F=2.18$	$d.f.=3; 180$	$p=.09$

*** $p<.01$, ** $p<.05$, * $p<.10$; Tolerance values for all independent variables $>.78$

Also here with the impact on operation we have run an alternate model where we have treated all EO dimensions as separate independent variables. Again, the main findings of this alternate model remain similar to the results presented here. The only difference was when the operations variable related to personnel was used as dependent variable. When innovativeness and proactiveness were treated separately results (Table 7) show that a significant and negative parameter estimate for innovativeness. This means that the personnel in more innovative firms have been less affected by the crisis.

Table 7

Regression results for personnel: Innovativeness and proactiveness as separate components

Independent variables	Model A ¹		Model B ²		Model C ²	
	<i>b</i> (s.e.)	<i>t</i> (<i>p</i>)	<i>b</i> (s.e.)	<i>t</i> (<i>p</i>)	<i>b</i> (s.e.)	<i>t</i> (<i>p</i>)
Constant	1.86	3.94	2.12	5.00	1.72	3.64
	.47	.000	.42	.000	.47	.000
International sales %	.01	2.86	.01	2.81	.01	2.58
	.00	.005	.00	.006	.00	.011
Innovativeness	-.33	-2.16	-.21	-1.77	n.a.	n.a.
	.15	.032	.12	.079		
Proactiveness	.20	1.24	n.a.	n.a.	-.02	-.13
	.16	.216			.12	.899
Risk taking	.11	.86	.13	1.07	.05	.40
	.12	.393	.12	.286	.12	.688
<i>Model fit</i>	$R^2=.064$	$F=3.00**$	$R^2=.056$	$F=3.47**$	$R^2=.039$	$F=2.40*$

¹ Tolerance values: innovativeness =.50, proactiveness =.52, other independent variables $>.79$

² Tolerance values for all independent variables $>.81$

**the model is significant at .05 level, *the model is significant at .10 level

5. Conclusion

In our study we were able to demonstrate that small Finnish firms were affected by the global economic crisis during the years 2008 and 2009. The results of our research indicate that entrepreneurial orientation does matter to how small firms face sudden recessions. Entrepreneurial orientation is generally assumed to be a behavioral phenomenon, with all

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3 SMEs along a continuum ranging from highly conservative to highly entrepreneurial
4 (Swierczek & Ha, 2003). The positive influence of EO on firm performance has also been
5 widely recognized. Lumpkin and Dess (2001) pointed out that two dimensions of EO affect
6 firm performance differently. Similarly, in the current study we found that during recession
7 dimensions of EO have an opposite influence on firms' financial performance. The effects of
8 economic downturn are stronger on risk-taking firms than on other firms. This result seems
9 logical because risk taking firms operate in an uncertain environment and often finance the
10 investments by borrowing and trying to utilize leverage. On the other hand, the
11 innovativeness-proactiveness dimension of EO also has a positive effect on firms'
12 performance during recession. This result also seems logical because innovativeness and
13 proactiveness reflect an important means by which firms try to find new business
14 opportunities mainly utilizing their own resources. Despite the risk-taking dimension of EO
15 having a negative effect on firms' financial performance during recession it can be said that
16 firms with higher EO survive better than firms with lower EO because of the smoothing
17 effects of innovativeness and proactiveness dimensions during recession.
18

19
20 At the operational level our findings show that the overall impact of the recession is
21 more detrimental to firms which are more risk-taking. Risk-taking firms tend to be in more
22 trouble especially in operations related both to short and long-term financing. This may be
23 because risk-taking firms may already be highly leveraged before the recession and when the
24 recession begins, rising interest rates along with decreasing sales can cause them financial
25 distress.
26

27 The findings of this study have several implications. From a practical point of view, our
28 results suggest that managers should be aware of the effects of entrepreneurial orientation on
29 performance and firm's operations in different business cycles. Especially, managers should
30 bear in mind, that actions such as venturing into the unknown, heavy borrowing, or
31 committing large portions of corporate assets in uncertain environments may have
32 detrimental consequences during economic downturns. Therefore, managers should be very
33 considerate when making decisions about investments or ventures containing high risk.
34 Although, on the other hand risk and return come often hand in hand. On the other hand, our
35 study encourages managers to be as innovative and proactive as possible, while these
36 attributes seem to enable firms to cope better with extremely harsh business conditions.
37

38 Our results have also implications apart from business managers. For policy-makers the
39 empirical evidence of this study should remind the importance of endorsing entrepreneurship
40 and creation of support programs and initiatives for innovations of SMEs. With these
41 aforementioned actions it may be possible to reinforce the national economy to endure better
42 the future's challenges.
43

44 This study has also implications for scholars as this study is demonstrating that the
45 relationship between EO and firm performance is related to the type of performance measure.
46 Therefore, it may be worthwhile to use only one dimension of performance at a time in
47 analyses and avoid combining different performance measures into one single indicator.
48 Since, the different performance dimensions may be contradictory and cancel each other out.
49

50 Every research has its limitations, our research has also some limitations. A longitudinal
51 design – rather than the current cross-sectional design – would give us a better premiss to
52 explore the causal relationships among the research variables. Repeating our survey in the
53 future will mitigate this problem.
54

55 In our study the financial measures are based on the financial statements of 2008 and
56 2009. The global economic downturn began in autumn 2008. The first effects of downturn
57 are apparent in financial statements of 2009. Thus in this study we were able to investigate
58 only how firms faced the recession.
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For the future, the EO-framework and our dataset still offer a wide set of possible research subjects. One of our future research interests is in how firms will survive the recession in the years to come and whether EO also contributes to/affects survival. It would be also worthwhile to test with these same small companies if the role of EO is different in benign time period compared to the recessionary time period used as an examination period in this study. Furthermore, testing the role of the EO within different line of businesses could be an interesting approach into this topic. Repeating the survey in the near future would yield an interesting longitudinal dataset. This kind of data offers a fruitful setting to investigate how the EO is evolving over time and to see if there are some factors which are cultivating and enhancing the level of the EO.

For Peer Review

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ARTICLE III

Soininen, J., Saarenketo, S., Puumalainen, K. and Sjögrén, H. (2011).

DOES INTERNATIONAL ENTREPRENEURSHIP MAKE FIRMS MORE VULNERABLE? – THE IMPACT OF GLOBAL ECONOMIC CRISIS ON FINNISH SMES

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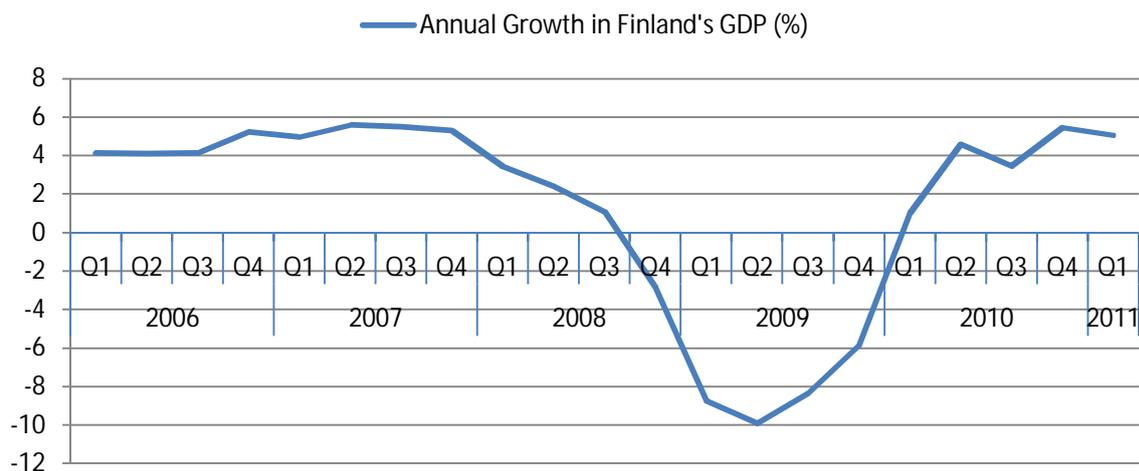
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INTRODUCTION

Between late 2007 and the second quarter of 2009, the global economy slid into a deep economic crisis (Naidoo, 2010). This global economic crisis has not only been severe for large enterprises, but also for small and medium-sized enterprises (SMEs), which have become an increasingly important component of economic development (Paul, Whittam & Wyper, 2007). The international financial crisis also caused an economic downturn in Finland. For instance, since the last quartile of 2008 the number of layoffs, order cancellations and financial difficulties has increased drastically, which has led among others to a 30 per cent increase in the number of bankruptcies among Finnish SMEs. Figure 1. illustrates the overall situation in the Finnish economy. It shows how Finland's GDP has evolved during the last 5 years. The annual growth of GDP started to slow down in the last quartile of 2007. The growth turned to negative in the third quartile of 2008 and stayed negative until the first quartile of 2010.

Figure 1. Annual Growth Percentage in Finland's GDP



(Statistics Finland, 2011)

This recent sudden and extraordinary decline has shown how turbulent and vulnerable the international and also the national business environment can nowadays be. Theory and empirical evidence suggest that deep economic crises have profound effects on firms, but the effects are unevenly distributed among them (Narjoko & Hill, 2007). In this framework it is

essential to further investigate if there are some firm specific strategic factors that enable SMEs to better tolerate these upheavals in the surrounding environment.

In this paper we will focus on the dimensions of entrepreneurial orientation (EO) and on the firm's degree of internationalization. We will explore how these factors affect a firm's financial performance during a recessionary period. The scientific contribution of this paper is multifaceted: Firstly, as Yusuf (2002) points out, there is a lack of consensus about the relationship between EO and performance in the presence of environmental uncertainty, therefore there is a need for this kind of study. Secondly, instead of the unidimensional approach to the concept of entrepreneurial orientation used in many papers (see for instance, Rauch et al., 2009), in this paper we take a multidimensional approach, as suggested by Lumpkin & Dess (2001), to more precisely capture the effects of the different dimensions of the EO on the firm's performance.

THEORETICAL FRAMEWORK AND HYPOTHESES

A substantial amount of research has examined the concept of entrepreneurial orientation (EO) thus it has become a central concept in the domain of entrepreneurship (Covin, Green & Slevin, 2006). Rauch et al. (2009) point out in their meta-analysis that more than 100 studies dealing with EO have been conducted, which has led to a wide acceptance of the conceptual meaning and relevance of the concept. Miller (1983) conceptualized the three focal dimensions of EO as *innovativeness, risk taking and proactiveness* and these three dimensions have thereafter been consistently used in the literature (Dimitratos et al., 2004; Kemelgor, 2002). Lumpkin and Dess (1996) describe innovativeness as follows: Innovativeness reflects a firm's tendency to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products, services, or technological processes. Innovativeness represents a basic willingness to depart from existing technologies or practices and venture beyond the current state of the art. They see innovativeness as an important component of an EO, because it reflects an important means by which firms pursue new opportunities. According to Baird and Thomas (1985) there are three different types of strategic risk taking such as venturing into the unknown, heavy borrowing, and/or committing large portions of corporate assets to uncertain environments. Similarly, Lumpkin and Dess (1996) state that firms with entrepreneurial orientation are often typified by risk-taking behavior, such as incurring heavy debt or making significant resource commitments in the interests of obtaining high returns by seizing opportunities in the marketplace. Rauch et al. (2009) describe proactiveness as an opportunity-seeking, forward-looking perspective characterized by the introduction of new services and products ahead of the competition and acting in anticipation of future demand.

The literature has confirmed the role of EO behind the economic success of firms. Several empirical studies have found that firms with high EO perform better than firms with low EO, for example Keh, Ngyuen & Hg (2007) found that EO plays an important role in enhancing firm performance. Similarly, Wiklund and Shepherd (2003) found a strong correlation between EO and performance. Whereas Wiklund (1999) showed that investments in EO may be worthwhile for small firms since there is a positive relationship between EO and performance and the relationship actually increases over time.

Lumpkin and Dess (2001) suggest that the dimensions of EO may relate differently to firm performance. Jones et al. (2011) in their recent review of 323 articles raise the question of differential effects of various EO dimensions in the context of international entrepreneurship. Moreover, Pearce II & Robbins (1994) indicate that firms that experienced externally caused downturns were more successful in their turnaround efforts when they

emphasized entrepreneurial activities, which are very similar to the innovativeness and proactiveness dimensions of EO in recovery response. Therefore, in the context of the recession we hypothesize the following:

H1a: The more innovative and proactive a firm is, the less its financial performance will be affected by the crisis

H1b: The more risk-taking firm is, the more its financial performance will be affected by the crisis.

The origin of the latest economic crisis is in the US markets, from which it started to spread all over the globe in late 2007. Therefore it can be seen as an exogenous negative shock, which hit the Finnish economy with a lag. Indeed, as the crises today spread almost instantly across the globe internationally operating entrepreneurs do not have the same means as before to even out the losses made on one market with the profits made on some other markets. Therefore it is only logical to argue that export dependent companies would be the first to suffer from the crisis and those that are less reliant on international sales would be harmed less and face the challenges only later. Therefore, we hypothesize the following:

H2: The higher the firm's degree of internationalization is, the sooner the firm's performance will be affected by the crisis.

RESEARCH METHOD

Sample and Data Collection

To empirically test our hypotheses we use two distinct but very similar data sets. The first data set was collected in spring 2008 by a web survey from a sample of 1,147 Finnish entrepreneurial SMEs in five industries in the manufacturing and service sectors. The sample was retrieved from the Amadeus database and consists of firms employing 10-500 persons. The pretested questionnaire was targeted at the top-management level in the firms in order to enable a reliable appraisal of the firm strategies. After an initial phone call and two rounds of reminders, the final response rate was 22%, resulting in usable responses from 255 companies.

The second data set was drawn from a mail survey conducted in spring 2009 by means of a structured questionnaire. The initial population consisted of Finnish small private limited companies (they typically had few shareholders and were usually owner-managed family businesses) with an annual sales turnover between one and 10 million Euros. Hypotheses were tested in a multiple industry setting, for greater generalizability. A total of 13,495 firms were identified from the Voitto+- database, and a systematic random sample of 1,026 firms was drawn. The pre-tested survey questionnaire with an introductory cover letter was mailed to the respondents, who were assured of confidentiality and promised a summary of the results. A follow-up was sent to those who had not responded within two weeks. Final responses were received from 194 companies, yielding a satisfactory effective response rate of 18.9 percent (194/1026).

It was possible to obtain financial information on the companies responding to both surveys from the Amadeus database. However, 20 respondent firms in the first survey and 23 firms in the second survey could not be found in the Amadeus database. Thus both the survey and financial information were available for $235 + 173 = 408$ companies. Both surveys were checked for possible non-response biases according to the procedure suggested by Armstrong and Overton (1977) with satisfactory results.

Measures and analysis method

We utilize multiple items to capture the three dimensions of EO conceptualized by Miller (1983). The items are based on the work of Covin and Slevin (1990). However, they were slightly adapted to better suit the context of Finnish small enterprises. The item wordings were also adjusted between the two samples, because the firms in the second survey were smaller than in the first survey. A principal component analysis of the EO items was run separately for each sample, and the results are shown in Tables 1 and 2. Both samples resulted in two components with eigenvalues greater than unity, explaining together 66% of the variance in the items in sample 1 and 61% in sample 2. In both samples, the items measuring innovativeness and proactiveness merged into the first component, while risk taking items loaded highly on the second component. The final measure for innovativeness-proactiveness was taken as an average of the five items that had highest loadings on the first principal component, and the risk-taking measure was the average of four items in sample one and three items in sample two. Finally, the original 7-point Likert scale applied in the first survey was converted to a 5-point scale to achieve comparability across datasets. This was done using the following conversion formula:

$$\text{Likert5} = 2/3 * (\text{Likert7} - 1) + 1$$

The internal consistency of the scales was good, as the Cronbach's alpha values for innovativeness/proactiveness were .861 in the first sample and .865 in the second sample. The reliability coefficients for risk-taking were .823 and .671 respectively.

Table 1. principal component analysis of EO items in the first sample

Items	Innovativeness- proactiveness	Risk- taking	Community
In dealing with its competitors, my firm is very often the first business to introduce new products/services, administrative techniques, operating technologies, etc.	.823	.197	.715
In general, the top managers of my firm have a strong tendency to be ahead of others in introducing novel ideas or products.	.797	.250	.698
In dealing with its competitors, my firm typically initiates actions which competitors then respond to.	.776	.110	.614
We have very many new product lines/services (marketed in the past 5 years)	.705	.357	.624
In general, the top managers of my firm favor a strong emphasis on R&D, technological leadership, and innovations	.637	.485	.641
A strong proclivity for high risk projects (with prospects for very high returns)	.114	.875	.778
Owing to the nature of the operational environment, bold and wide-ranging actions are necessary to achieve the firm's objectives	.254	.838	.766
When confronted with decisions involving uncertainty, my firm typically adopts a bold posture in order to maximize the probability of exploiting opportunities	.270	.741	.622
Changes in product or service lines have usually been quite dramatic	.447	.557	.510
Eigenvalue	4.76	1.21	
Cum % var	52.92	66.34	
Cronbach's alpha	.861	.823	

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Table 2. Principal component analysis of EO items in the second sample

Item	Innovativeness- proactiveness	Risk- taking	Community
Continuous renewal and innovation are important for our company	.809	.237	.711
We invest heavily in developing new products, services and business practices.	.805	.168	.676
In our company, new ideas come up all the time.	.788	.122	.635
We aim at being at the forefront of development in our business sector.	.759	.222	.625
Lately we have launched many new products/ services.	.729	.135	.550
Our company often acts before the competitors do.	.629	.193	.434
In uncertain situations we are not afraid to take substantial risks.	<.200	.820	.677
Bold action is necessary to achieve our company's objectives.	.316	.737	.643
We prefer the cautious line of action even if some opportunity might be lost that way.(Reversed)	-.197	-.695	.522
Eigenvalue	4.22	1.25	
Cum % of variance	46.9	60.8	
Cronbach's alpha	.865	.671	

Principal Component Analysis with Varimax rotation. KMO measure of sampling adequacy =.846, Bartlett Chi Square= 686 with 36 d.f., p=.000, MSA for individual items ranged from .73 to .93

As measures for financial performance we are using measures representing scale, liquidity, and profitability over the five-year period from 2006 to 2010, which was the most recent year available for the majority of the companies at the time of the study. The scale of the company was measured by the number of employees, operating revenue in thousands of Euros. The liquidity measure was the current ratio, and profitability measures included return on total assets as a percentage and the profit margin percentage.

To measure the (level of) firm's degree of internationalization (DOI) we used the international sales percentage as reported by the respondents at the time of the survey. The measure is calculated as follows: the sales generated outside of Finland are divided by the firm's total sales.

In the final analyses we used multiple linear regression analysis to test our hypotheses. We used the financial performance indicators for $t=2007$ to $t=2010$ as dependent variables in estimating the following equation:

$$\begin{aligned} \text{Financial performance}_{it} &= b_0 + b_1 \text{DOI}_i + b_2 \text{financial performance}_{it-1} \\ &+ b_3 \text{innopro}_i + b_4 \text{risktaking}_i \end{aligned}$$

RESULTS

Descriptive statistics

The descriptive information on our key variables in the sample is shown in Tables 3. and 4.

In the first dataset 93 (36%) firms operated internationally at the time of the survey. In the second dataset 57 (30% out of 188 who responded to this question) firms had some international operations. The comparison of the two datasets can be seen in Table 3. The median age of the firms was about twenty years, while the firms in the first dataset were generally a couple of years older than in the second dataset. In operating revenue, the distribution is skewed in the first sample, resulting in larger means and standard deviations than in the second sample. However, the median values are about the same in both datasets. Both datasets show a similar trend in average and median revenues over time: there is a growing trend from 2006 to 2008, followed by a sharp decrease in 2009 and the year 2010 remaining about the same as the previous year. In total assets, the differences across samples are similar to those in operating revenue, but the development over time is much more stable. The average and median numbers of employees in sample 1 are about twice the numbers in sample 2. The average trend is similar in both samples: the numbers of employees increased slightly from 2006 to 2008, then dropped in 2009 but recovered to the 2008 level in 2010. As the median values for employees are more stable over time, it seems that the smaller companies experienced fewer changes in employees than the larger companies in our samples.

The average percentage of international sales (DOI) was 11.25 in the first sample and 10.39 in the second sample... The median values are zero, as the majority of respondent firms in both datasets operated only in the domestic market. The distributions of the two dimensions of entrepreneurial orientation were normally distributed with a mean value close to the midpoint of the scale. The average risk taking propensity was slightly lower than the mean value of innovativeness and proactiveness. There was a statistically significant difference between the two datasets, as both EO dimensions had larger values in the second sample.

Table 3. Descriptive information on key variables

	Mean			Median			Std. Deviation			N			M-W p
	Data 1	Data 2	Total	Data 1	Data 2	Total	Data 1	Data 2	Total	Data 1	Data 2	Total	
Year est.	1983.94	1990.02	1986.59	1990.00	1992.00	1991.00	21.09	11.98	17.95	249	192	441	.028
DOI (%)	11.25	10.39	10.88	0.00	0.00	0.00	23.61	23.52	23.55	246	185	431	.289
Inno-pro	3.17	3.50	3.31	3.27	3.50	3.40	0.84	0.79	0.83	252	192	444	.000
Risk-taking	2.49	2.95	2.69	2.50	3.00	2.67	0.80	0.83	0.84	252	192	444	.000
Op. Rev. 2010	4018	2302	3261	1666	1765	1738	6474	1730	5039	152	120	272	.897
Op Rev 2009	4748	2213	3663	1746	1686	1720	10142	1758	7851	230	172	402	.638
Op Rev 2008	6089	2801	4695	1902	2055	1973	14799	2267	11434	235	173	408	.448
Op Rev 2007	5607	2615	4332	1894	1907	1900	12594	1898	9725	233	173	406	.467
Op Rev 2006	4712	2267	3646	1574	1727	1671	10161	1710	7802	220	170	390	.254
Tot assets 2010	2534	1412	2039	998	973	998	4460	1497	3518	152	120	272	.625
Tot assets 2009	2882	1472	2279	972	912	918	7447	1691	5777	230	172	402	.980
Tot assests 2008	3313	1553	2567	948	966	955	9205	1724	7122	235	173	408	.908
Tot assets 2007	3073	1448	2380	890	958	908	7233	1645	5636	233	173	406	.971
Tot assets 2006	2758	1311	2128	786	823	801	6126	1606	4771	220	170	390	.926
Employees 2010	37.40	17.45	29.37	20.00	11.50	16.00	43.24	17.62	36.50	95	64	159	.000
Employees 2009	34.29	15.47	25.88	20.00	11.00	16.50	40.25	14.50	32.79	166	134	300	.000
Employees 2008	37.02	17.27	28.97	20.00	10.00	17.00	54.25	20.75	44.82	176	121	297	.000
Employees 2007	34.29	15.79	26.64	19.00	10.00	16.00	55.19	18.20	44.75	210	148	358	.000
Employees 2006	30.20	14.87	23.91	17.00	10.00	14.00	45.33	16.41	37.10	214	149	363	.000

The comparison between domestic and international firms is shown in Table 4. In terms of age there are no differences, but international firms are more entrepreneurially oriented (the difference is statistically significant at the 5% level according to Mann-Whitney test).

The operating revenues of domestic firms have lower mean, median and standard deviation values than those of international companies. The increasing trend from 2006 to 2008 and the following decline in 2009 are more dramatic in international companies than in domestic ones. The same differences can be seen in total assets and number of employees.

The liquidity measured by the Current ratio has on the average remained about the same during the years 2006-2010 and there are no statistically significant differences between domestic and international firms.

The profitability of Finnish SMEs has clearly been affected by the financial crisis. ROA increased about 3% units from 2006 to 2007, then reverted to the 2006 level in 2008, but dropped again about 4% units in 2009 and did not show much recovery during 2010. The difference between domestic and international firms was statistically significant until 2009, domestic firms having 3-5 percentage points higher average return on total assets. The profitability differences between domestic and international firms show a similar pattern if we look at the profit margins.

Table 4. Comparison between domestic and international firms

	Mean			Median			Std. Deviation			N			M-W p
	Domestic	International	Total	Domestic	International	Total	Domestic	International	Total	Domestic	International	Total	
Year est	1986.23	1987.02	1986.50	1991.00	1991.00	1991.00	18.79	16.43	18.02	290	146	436	.721
DOI (%)	0.40	33.47	10.89	0.00	20.00	0.00	2.70	31.59	23.60	293	136	429	.000
innopro	3.16	3.60	3.31	3.27	3.67	3.40	0.88	0.66	0.83	291	148	439	.000
risktaking	2.63	2.81	2.69	2.67	2.83	2.67	0.87	0.79	0.85	291	148	439	.028
Op Rev 2010	2705	4540	3278	1497	2349	1749	4518	5931	5063	185	84	269	.000
Op Rev 2009	2734	5693	3680	1484	2436	1704	4882	11855	7925	268	126	394	.000
Op Rev 2008	2999	8341	4722	1715	3181	1965	4888	18582	11541	271	129	400	.000
Op Rev 2007	2765	7594	4367	1630	2934	1900	4259	15477	9815	266	132	398	.000
Op Rev 2006	2447	6160	3669	1427	2371	1674	4256	11944	7866	257	126	383	.000
Tot assets 2010	1629	2981	2051	867	1551	1002	2667	4829	3536	185	84	269	.000
Tot assets 2009	1512	3956	2294	827	1467	908	2460	9485	5833	268	126	394	.000
Tot assets 2008	1534	4771	2578	843	1634	952	2467	11881	7190	271	129	400	.000
Tot assets 2007	1469	4270	2398	814	1557	904	2501	8952	5689	266	132	398	.000
Tot assets 2006	1366	3723	2142	734	1422	796	2424	7413	4811	257	126	383	.000
CR 2010	3.04	3.26	3.11	1.66	1.87	1.77	7.01	7.85	7.27	185	84	269	.270
CR 2009	3.42	2.53	3.14	1.77	2.00	1.81	7.38	2.07	6.21	267	126	393	.389
CR 2008	2.55	2.32	2.48	1.71	1.77	1.72	3.64	1.95	3.19	270	129	399	.385
CR 2007	2.22	2.19	2.21	1.58	1.66	1.60	2.36	1.80	2.19	266	132	398	.231
CR 2006	2.14	2.23	2.17	1.55	1.71	1.61	2.55	1.89	2.35	257	126	383	.082
Employees 2010	25.91	35.91	29.52	14.00	25.00	16.50	36.40	36.31	36.57	101	57	158	.007
Employees 2009	23.20	31.11	26.08	15.00	18.00	17.00	31.11	35.75	33.04	187	107	294	.037
Employees 2008	22.69	40.32	29.26	16.00	20.00	17.00	25.19	65.28	45.26	182	108	290	.050
Employees 2007	19.79	40.71	26.90	15.00	19.00	16.00	23.05	68.62	45.17	231	119	350	.002
Employees 2006	19.43	32.85	24.03	14.00	17.00	14.00	24.96	52.73	37.38	234	122	356	.017
Profit margin 2010	5.40	2.87	4.61	5.52	2.70	4.50	13.82	15.01	14.22	183	83	266	.171
Profit margin 2009	5.37	1.54	4.17	4.89	2.70	4.16	13.66	16.20	14.59	266	122	388	.054
Profit margin 2008	6.69	5.16	6.20	5.48	4.63	5.11	12.38	12.59	12.45	270	126	396	.096
Profit margin 2007	8.35	7.58	8.09	6.24	4.82	6.05	10.84	10.57	10.75	266	132	398	.229
Profit margin 2006	7.30	4.12	6.26	5.24	4.76	5.03	10.21	13.64	11.52	257	125	382	.077
ROA 2010	8.16	7.99	8.11	9.05	5.20	8.30	20.38	15.62	18.99	183	83	266	.422
ROA 2009	9.24	6.11	8.24	9.84	5.91	8.21	22.05	21.26	21.82	265	124	389	.048
ROA 2008	13.93	8.87	12.30	13.13	8.10	11.72	18.24	23.50	20.20	269	128	397	.007
ROA 2007	16.26	13.82	15.45	14.66	11.78	14.01	17.22	16.23	16.92	266	131	397	.066
ROA 2006	14.38	9.26	12.69	11.66	9.32	11.09	17.07	18.34	17.64	257	126	383	.033

Hypotheses testing

To empirically test our hypotheses we ran several linear regression analyses. Table 5. presents the results on the relationship between profitability and DOI and the components of EO are presented. A closer look at the results shows that the role of the *DOI* varies over time. In the recessionary years, such as 2008 and 2009, the *DOI* has a clearly negative effect on the profitability of the Finnish SMEs, whereas in the recovery stage in 2010 the *DOI* has a positive effect on profitability. This kind of pattern could imply that the firms also operating in the international markets may be doing business in very cyclical industries where the price of the product is very volatile but the costs are harder to adjust.

Interestingly, the role of EO seems to have significant effects on profitability when the recession was at its worst. In 2009, the more innovative and proactive firms tended to suffer less from the recession than their less innovative and proactive counterparts. At the same time the firms characterized by high risk-taking seemed to be hit harder by the recession. The results clearly show that the different dimensions of the EO have divergent effects on the firm's profitability in harsh economic conditions.

Table 5. Regression Analysis of Results: Profitability

DEPENDENT VARIABLE		ROA 2010		
Variable	Parameter Estimate	<i>t-value</i>	<i>p-value</i>	
Intercept	7.66*	1.93	0.06	
Degree of internationalization	0.47***	10.84	<.01	
ROA 2009	-0.02	-0.42	0.68	
Innovativeness-proactiveness	-0.56	-0.42	0.67	
Risk-taking	-0.43	-0.31	0.76	
Model fit				
<i>F-value</i>	32.61***	<i>R-Square</i>	0.35	
DEPENDENT VARIABLE		ROA 2009		
Variable	Parameter Estimate	<i>t-value</i>	<i>p-value</i>	
Intercept	4.68	1.15	0.25	
Degree of internationalization	-0.09**	-2.17	0.03	
ROA 2008	0.51***	10.50	<.01	
Innovativeness-proactiveness	2.41*	1.69	0.09	
Risk-taking	-3.79**	-2.70	0.01	
Model fit				
<i>F-value</i>	34.06***	<i>R-Square</i>	0.27	
DEPENDENT VARIABLE		ROA 2008		
Variable	Parameter Estimate	<i>t-value</i>	<i>p-value</i>	
Intercept	4.66	1.33	0.18	
Degree of internationalization	-0.06*	-1.64	0.10	
ROA 2007	0.64***	12.98	<.01	
Innovativeness-proactiveness	0.29	0.24	0.81	
Risk-taking	-1.00	-0.84	0.40	
Model fit				
<i>F-value</i>	43.62***	<i>R-Square</i>	0.32	
DEPENDENT VARIABLE		ROA 2007		
Variable	Parameter Estimate	<i>t-value</i>	<i>p-value</i>	
Intercept	5.71*	1.87	0.06	
Degree of internationalization	0.05	1.44	0.15	
ROA 2006	0.54***	13.19	<.01	
Innovativeness-proactiveness	0.99	0.95	0.34	
Risk-taking	-0.21	-0.20	0.84	
Model fit				
<i>F-value</i>	44.25***	<i>R-Square</i>	0.33	

Table 6. presents the results with the liquidity measure as a dependent variable. In this case the results indicate, at least to some extent, that in 2008 the firms engaging more in international business tended to face a slightly bigger drop in the liquidity measure than the firms operating only in domestic markets. As in the case of the profitability, also when measuring liquidity, the results show that innovativeness and proactiveness have a different effect than risk-taking on a firm's liquidity. According our result, by being more innovative and proactive the firm can actually mitigate the negative effect of the economic downturn on its liquidity measured by current ratio. At the same time risk-taking seems to amplify the negative effect of the recession on a firm's liquidity.

Table 6. Regression Analysis Results: Liquidity

DEPENDENT VARIABLE		Current Ratio 2010		
Variable	Parameter Estimate	<i>t-value</i>	<i>p-value</i>	
Intercept	3.89**	2.29	0.02	
Degree of internationalization	0.00	-0.10	0.92	
Current Ratio 2009	0.58***	8.39	<.01	
Innovativeness-proactiveness	-0.25	-0.44	0.66	
Risk-taking	-0.65	-1.07	0.28	
Model fit				
<i>F-value</i>	19.26***	<i>R-Square</i>	0.23	
DEPENDENT VARIABLE		Current Ratio 2009		
Variable	Parameter Estimate	<i>t-value</i>	<i>p-value</i>	
Intercept	0.02	0.02	0.98	
Degree of internationalization	-0.01	-0.82	0.41	
Current Ratio 2008	1.43***	20.64	<.01	
Innovativeness-proactiveness	0.07	0.22	0.82	
Risk-taking	-0.20	-0.62	0.54	
Model fit				
<i>F-value</i>	109.32***	<i>R-Square</i>	0.54	
DEPENDENT VARIABLE		Current Ratio 2008		
Variable	Parameter Estimate	<i>t-value</i>	<i>p-value</i>	
Intercept	-0.25	-0.47	0.64	
Degree of internationalization	-0.01*	-1.72	0.08	
Current Ratio 2007	0.97***	17.40	<.01	
Innovativeness-proactiveness	0.54***	2.99	<.01	
Risk-taking	-0.40**	-2.28	0.02	
Model fit				
<i>F-value</i>	78.53***	<i>R-Square</i>	0.46	
DEPENDENT VARIABLE		Current Ratio 2007		
Variable	Parameter Estimate	<i>t-value</i>	<i>p-value</i>	
Intercept	0.54**	2.10	0.04	
2006 Degree of internationalization	0.00	-0.03	0.98	
Current Ratio	0.81***	31.50	<.01	
Innovativeness-proactiveness	-0.03	-0.31	0.76	
Risk-taking	0.01	0.14	0.89	
Model fit				
<i>F-value</i>	248.87***	<i>R-Square</i>	0.73	

Table 7 presents the results of the model with operating revenue as the dependent variable. The results indicate that DOI has a varying effect on firm's operating revenue. In good economic conditions, such as 2007, the operating revenue tends to increase more when the firm operates more outside its domestic markets.

However, in times of recession in 2009 DOI has a negative effect on operating revenue meaning that the greater the proportion of firm's sales comes from outside of Finland, the greater is the decrease in firm's sales. This pattern could indicate that the firms doing business outside Finland operate in highly cyclical branches of industry. Once again, the risk-taking component seems to amplify the negative effect of the surrounding economic environment, as the operating revenue decreases more when the firms are more risk-taking.

Table 7. Regression Analysis Results: Operating Revenue

DEPENDENT VARIABLE		Operating Revenue 2010		
Variable	Parameter Estimate	t-value	p-value	
Intercept	47.42	0.15	0.88	
Degree of internationalization	-3.63	-1.09	0.28	
Operating Revenue 2009	0.99***	64.79	<.01	
Innovativeness-proactiveness	-35.09	-0.32	0.75	
Risk-taking	100.51	0.90	0.37	
Model fit				
F-value	1099.17***	R-Square	0.95	
DEPENDENT VARIABLE		Operating Revenue 2009		
Variable	Parameter Estimate	t-value	p-value	
Intercept	731.93	1.33	0.18	
Degree of internationalization	-17.26***	-2.85	<.01	
Operating Revenue 2008	0.72***	55.92	<.01	
Innovativeness-proactiveness	244.69	1.24	0.21	
Risk-taking	-319.33*	-1.65	0.09	
Model fit				
F-value	847.86***	R-Square	0.90	
DEPENDENT VARIABLE		Operating Revenue 2008		
Variable	Parameter Estimate	t-value	p-value	
Intercept	-601.67	-1.30	0.20	
Degree of internationalization	2.70	0.53	0.60	
Operating Revenue 2007	1.17***	99.76	<.01	
Innovativeness-proactiveness	66.81	0.41	0.68	
Risk-taking	29.60	0.19	0.85	
Model fit				
F-value	2754.62***	R-Square	0.97	
DEPENDENT VARIABLE		Operating Revenue 2007		
Variable	Parameter Estimate	t-value	p-value	
Intercept	-810.73*	-1.71	0.09	
Degree of internationalization	15.44***	2.98	<.01	
Operating Revenue 2006	1.22***	83.22	<.01	
Innovativeness-proactiveness	-23.50	-0.14	0.89	
Risk-taking	222.78	1.36	0.17	
Model fit				
F-value	1919.07***	R-Square	0.96	

CONCLUSION

International entrepreneurs play an increasingly important role in the current global economy. However, after two decades of intensive research, there is still a limited understanding of the variables that determine the performance and survival of international entrepreneurial firms (Mudambi and Zahra, 2007). In this paper we tested how Finnish entrepreneurial firms were affected by the global financial crisis and if some firm specific factors mitigated the effects of the economic downturn.

Our findings indicated that the stage of the recession might affect how different strategic choices were related to the firm's performance. We find that the recessions first affected the performance of those Finnish companies which are internationally active in their businesses. However, a year after the first signs of the recession the innovativeness-

proactiveness and risk-taking dimensions of EO had significant effects on the firms' financial performance. Our results showed that more innovative and proactive firms tended to suffer a smaller decrease in sales than their less innovative and proactive counterparts. This implies that in times of recession firms can benefit from being innovative and proactive. On the other hand, the risk-taking dimension has a negative effect on firms' profitability. This could be due to the fact that more risk-taking firms may suffer more from rising interest rates than their less risk-taking counterparts, since risk-taking is typically associated with heavy borrowing and high indebtedness. Finally, we hope that our study will help to identify the factors that influence the survival and recovery of international entrepreneurial firms.

In future research it would be interesting to see what (kind of) role the entrepreneurial orientation and the firm's degree of internationalization play in the recovery process in the longer term. Now this question remains unanswered due to the lack of data while the financial crisis is still too close. Also, a second inviting avenue for future research would be to explore the role of EO in internationalization. It would be interesting to see whether being innovative, proactive, and willing to take risks can actually enhance a firm's readiness to go abroad and achieve success there.

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ARTICLE IV

Soininen, J., Puumalainen, K., Sjögrén, H., Syrjä, P. and Durst, S. (2013)

**ENTREPRENEURIAL ORIENTATION IN SMALL FIRMS: A VALUES-ATTITUDES-
BEHAVIOR APPROACH**

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Entrepreneurial orientation in small firms: a values-attitudes-behavior approach

1 INTRODUCTION

Personal values are at the very core of the diverse world of human behavior and every decision and action is a manifestation of those values (Uy, 2011). The link between values, attitudes, and behavior has been recognized in numerous business and management studies (e.g. Connors and Becker, 2003; Defever *et al.*, 2011). Moreover, Hemingway (2005) points out that there is a consensus among most researchers that values are predictors of actual behavior through instrumental concepts like desires, attitudes, or intentions. Taking into account the crucial role of entrepreneurial behavior in economic development, recent calls for micro-foundations in explaining firms' strategic behavior, and the re-emergence of interest in personality factors in entrepreneurship research, there is clearly a need for studies providing a coherent framework and empirical testing of the mechanisms through which the individual entrepreneur's values affect the strategically important firm-level behaviors in SMEs.

Different strategic orientations of businesses, such as market, customer, learning, technology and entrepreneurial orientations, have gained considerable attention from both managers and management scholars (Hakala, 2011). A number of studies have shown that one of these orientations alone (Kohli and Jaworski, 1990; Calantone *et al.*, 2002; Wiklund and Shepherd, 2005) and also the interaction between the orientations or different combinations of the orientations may provide a source of high performance or competitive advantage for organizations (Hult *et al.*, 2004; Eggers *et al.*, 2013). As these strategic orientations are significant drivers of a firm's performance, we focus here on one of them, more specifically on entrepreneurial orientation.

Entrepreneurial orientation (EO), which has emerged as a major construct in the strategic management and entrepreneurship literature, is discernible in an entrepreneur's behavior. EO is generally defined as a strategic construct whose conceptual domain includes certain firm-level outcomes and management-related preferences, beliefs, and behaviors as expressed among a firm's top-level managers (Covin *et al.*, 2006). Runyan *et al.* (2008) argue that EO is evidenced through visible entrepreneurial tendencies towards innovativeness, proactiveness and risk taking. Miller (1983) and later Covin and Slevin (1989) operationalized these constructs and see them as central to EO. These dimensions of EO can be defined as follows (Miller, 1983; Covin and Slevin, 1989): *Innovativeness* refers to creativity and experimentation through the introduction of new products/services as well as technological leadership via R&D in new processes. *Risk taking* describes the nature of easily venturing into the unknown, borrowing heavily, and/or committing remarkable resources to ventures in uncertain environments. *Proactiveness* is an opportunity-seeking, forward-looking perspective characterized by the introduction of new products and services ahead of the competition and acting in anticipation of future demand.

Studies on EO have typically focused on the causal relationships between EO and firms' performance (Cassia and Minnola, 2012). Several studies have found this relationship to be

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3 positive (Eggers *et al.*, 2013; Kraus, 2011; Soininen *et al.*, 2012; Madsen, 2007; Wiklund and
4 Shepherd, 2005; Jantunen *et al.*, 2005) some studies (Kraus, *et al.*, 2012; Soininen *et al.*,
5 2012) have also demonstrated the crucial role of EO in surviving through times of severe
6 economic turbulence caused by economic crises. Research on the antecedents of EO is less
7 plentiful, often concentrating on the organizational, environmental or demographic (gender,
8 age, level of education) factors that foster entrepreneurial behaviors (Morris *et al.*, 2007;
9 Jalali, 2012; Zahra, 2013).
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13 The personal characteristics of the entrepreneur or top manager have commanded less
14 attention in empirical studies even though owners' personality, values and identities are
15 recognized as important, especially in the small firm context (Simsek *et al.*, 2010; Miller,
16 2011; Miller and Le Breton-Miller, 2011). Moreover, Pines *et al.* (2012, pp. 96) note that "*in*
17 *recent years research on entrepreneurial personality has re-emerged as an important topic*
18 *of investigation and leading entrepreneurship scholars have noted that a psychological*
19 *approach is necessary to understand entrepreneurship*". Wiklund (1999) also argues that
20 when applied to small or newly established firms, EO may be seen as a result of individual-
21 level determinants rather than firm-level outcomes. More research is therefore needed
22 focusing on the individual entrepreneur's personality in explaining EO.
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26 Studies have mostly examined the values, motivations, and other personal dimensions that
27 are characteristic of entrepreneurs and differentiate them from people pursuing other types of
28 careers (Chaganti *et al.*, 2002). The studies have often concentrated on psychological traits
29 like need for achievement, risk-taking propensity, locus of control, self-efficacy, and the type
30 of personality of the small business manager (Begley and Boyd, 1987; Poon *et al.*, 2006).
31 Our purpose is to shift the focus from the innate psychological traits to more socially
32 developed aspects of personality, namely the work values of the owner-manager.
33 Furthermore, we do not aim at finding values that distinguish entrepreneurs from others, but
34 posit that entrepreneurs are unique individuals with different personal values affecting their
35 decision-making process while doing business. Following Lyons *et al.*, (2006; 2010) we
36 apply a four-dimensional structure of work-related personal values: *intrinsic*, *extrinsic*,
37 *status*, and *social* values. Similar dimensions have been used in the related literature, e.g.
38 explaining students' intentions to become an entrepreneur (Phan *et al.*, 2002) and explaining
39 entrepreneurial behavior in corporate contexts (Hemingway, 2005; van Wyk and Adonisi,
40 2012).
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45 The specific causal mechanisms that link values to behavior have been fairly extensively
46 studied, but not so far within the entrepreneurship and small business management discipline.
47 Frameworks where values are seen to impact indirectly on behavior through attitudes have
48 been tested and validated in various contexts, e.g. consumer behavior (Homer and Kahle,
49 1988; Shim and Eastlick, 1998), environmental studies (Cottrell, 2003), and social
50 psychology (Milfont *et al.*, 2010). On the other hand, the role of attitudes in entrepreneurship
51 research is well established, mainly due to the extensive application of Ajzen's (1991) theory
52 of planned behavior (TPB), where attitudes are posited as three main antecedents to
53 behavioral intentions and thus indirectly to actual behavior.
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57 However, a coherent framework linking values, attitudes, and behavior in entrepreneurship
58 theory has not so far been presented and tested. As Milfont *et al.* (2010) argued the
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relationships between values, attitudes and behavior are one of the most examined frameworks in the social psychology and it is widely acknowledged that values indirectly influence behavior through attitudes (Defever *et al.*, 2011; Uy, 2011). Similar kinds of cognitive approaches has also been applied in the field of entrepreneurship as Thornton *et al.* (2011) focused on the link between socio-cultural factors and entrepreneurial activity and concluded that individual values have consequences for supporting or discouraging entrepreneurial behaviour. Furthermore, Okhomiya (2010) showed that psychological traits are significantly influencing the entrepreneurial orientation. Similarly the role of attitudes in the field of entrepreneurship has been covered in studies by Gird and Bagraim (2008) and Liñán *et al.* (2011). Both studies concluded that behavior will depend on the person's attitudes towards that voluntary behavior and personal attitudes are among the most relevant factors explaining the entrepreneurial behavior. Similarly, the findings of this paper confirmed the important role of the psychological factors such as values and attitudes as antecedents of entrepreneurial behavior.

As the previously mentioned studies demonstrate, there is already some evidence that both values and attitudes are predictors of entrepreneurial behavior. However, the entrepreneurship theorizing still lacks a coherent framework showing the relationships between these constructs, and thus we fill this gap by applying the framework where attitudes act as a mediating variable between values and behavior also in the context of entrepreneurship. Hence, when we linked the values, attitudes and behavior together as it is done in studies in other fields of research we found the significant mediating role of attitudes between the values and entrepreneurial behavior. This finding has a significant contribution to both entrepreneurship and social psychology literature demonstrating the validity of values-attitudes-behavior framework when it is applied in the context of entrepreneurship. Our results demonstrated that the influence flows from relatively stable and abstract work values to more concrete and domain-specific attitudes and finally to entrepreneurial behaviour.

Our paper aims to increase the understanding of entrepreneurially oriented behavior, especially in the small business context, where a manager's role is crucial. Understanding the antecedents and the underlying mechanisms of EO is an important matter, which has also many practical implications besides merely identifying the factors enhancing firm's ability to succeed. Confirming the relation between personal work values and entrepreneurially oriented behavior may have many practical implications. For instance when recruiting team members or employees for projects, start-ups or other ventures where entrepreneurial behavior is needed work values could be used at least for some level of indicator for applicants tendencies towards desired behavior. Similarly in career counseling work values could be used as tools for recognizing possible future entrepreneurs.

This article is structured as follows: After the introductory section we review the relevant literature and define the concepts, also outlining some rationale for the links between the concepts. After the literature review we describe the methodology used in the empirical research and present the findings of our data analyses. The last section summarizes the results and implications of our study.

2 THEORETICAL BACKGROUND

2.1 The concept of entrepreneurial orientation

A substantial amount of research has examined the concept of entrepreneurial orientation, making it a central concept in the domain of entrepreneurship (Covin *et al.*, 2006). Rauch *et al.* (2009) pointed out in their meta-analysis that more than 100 studies dealing with EO have been conducted, which has led to a wide acceptance of the conceptual meaning and relevance of the concept.

The starting point of EO research is Miller's (1983) study where he conceptualized the three focal dimensions of EO as *innovativeness, risk taking and proactiveness*. Since then these three dimensions have been used consistently in the literature (Dimitratos *et al.*, 2004; Kemelgor, 2002). Lumpkin and Dess (1996) have described innovativeness as follows: Innovativeness reflects a firm's tendency to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products, services, or technological processes. Innovativeness represents a basic willingness to depart from existing technologies or practices and venture beyond the current state of the art. Lumpkin and Dess (1996) see innovativeness as an important component of EO, because it reflects an important means by which firms pursue new opportunities. According to Baird and Thomas (1985) there are three different types of strategic risk taking, namely venturing into the unknown, heavy borrowing, and/or committing large portions of corporate assets in uncertain environments. Similarly, Lumpkin and Dess (1996) state that firms with an entrepreneurial orientation are often typified by risk-taking behavior, such as incurring heavy debts or making significant resource commitments in the interests of obtaining high returns by seizing opportunities in the marketplace. Rauch *et al.*, (2009) describe proactiveness as an opportunity-seeking, forward-looking perspective characterized by the introduction of new services and products ahead of the competition and acting in anticipation of future demand.

Besides these three most commonly used dimensions Lumpkin and Dess (1996) argue that two additional dimensions, *competitive aggressiveness* and *autonomy*, are also salient components of EO. Lumpkin and Dess (2001) define these two additional dimensions as follows: Competitive aggressiveness is said to reflect the intensity of a firm's effort to outperform industry rivals, characterized by a strong offensive attitude and a forceful response to competitor's actions. Autonomy is independent action by an individual or team aimed at creating a business concept or vision and carrying it through to completion.

Most EO research examines three dimensions instead of all these aforementioned five dimensions, implying that the scale developed by Covin and Slevin is the most common in the EO literature (Andersén 2010; Vora *et al.*, 2012). For instance, Rauch *et al.* (2009) in their meta-analysis show that all these five dimensions have been used in only one study (George *et al.*, 2001). Whereas 29 studies (e.g. Covin *et al.*, 1990; Covin *et al.*, 1994; Slater and Narver, 2000; Bhuian *et al.*, 2003; Wiklund and Shepherd, 2003) have used the same three dimensions as we use in the work at hand.

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3 While EO researchers seem to have reached some consensus about the dimensionality of EO,
4 but controversy persists about another important definitional issue. As Covin and Lumpkin
5 (2011) recently pointed out, it remains unclear whether EO should be understood as a
6 dispositional or a behavioral phenomenon. They share the view of Covin and Slevin (1991)
7 and Wales *et al.* (2011) that behavior is the central and essential element in the
8 entrepreneurial process and propose that non-observable elements pertaining to a firm's
9 disposition toward entrepreneurship may be *associated with* EO. However, such elements
10 should not *define* EO. Following these notions, we use dispositional characteristics like
11 personal work values and growth and survival attitudes as predictors of entrepreneurially
12 oriented behaviors.
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15 16 2.2 Owner-manager's work values and EO 17

18 Work values can be defined as "generalized beliefs about the desirability of certain attributes
19 of work and work-related outcomes" (Lyons *et al.*, 2006, p. 607). They are relatively
20 enduring, like human values in general (Rokeach, 1973), hierarchically ordered in the
21 individual's mind (Lyons *et al.*, 2010) and serve as criteria when making important work-
22 related decisions. Several different work value typologies have been presented, but there
23 appears to be a consensus on at least two fundamental types of values: firstly, *intrinsic*,
24 cognitive, immaterial, or expressive values pertain to the inherent psychological satisfactions
25 of work like challenge, variety, self-development, or intellectual stimulation. Secondly,
26 *extrinsic*, instrumental or material values relate to remuneration, benefits, job security and
27 comfort (e.g. Lyons *et al.*, 2010; Elizur, 1984; Vinken, 2007). Other types of work values
28 include for example *prestige* values relating to status, influence, and power, *altruistic* values
29 involving the desire to help others and make a contribution to society, and *social* values
30 pertaining to affective relations with other people (Lyons *et al.*, 2010).
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35 Hemingway (2005) reviewed the psychology and management literature in order to define
36 values and to determine their function. She concluded that a pervasive theme emerging from
37 the values literature was their role as ultimate drivers of (our) behavior through instrumental
38 concepts like desires, attitudes, or intentions. The pivotal role of values in the attitude
39 formation and/or subsequent behavior of business managers has been empirically supported
40 by several studies (England, 1967; Meglino and Ravlin, 1998; Oliver, 1999) but there is a
41 lack of studies on the links of values with entrepreneurial behavior.
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45 In the entrepreneurship and small business literature studies explicitly measuring work values
46 are mostly limited to using work values as a predictor of career choice, in particular
47 comparative studies on the work values of business founders vs. other careers have been
48 conducted and generally business founders have been found to exhibit higher levels of
49 intrinsic values (Fagenson, 1993). Some studies have shown that the work values of
50 managers are related to strategic business choices such as growth (Singh, 1989; Lafuente and
51 Salas, 1989) and adaptability vs. rigidity (Smith and Miner, 1983), but there are also
52 contradictory findings (Olson and Currie, 1992).
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55 Work value dimensions or closely related concepts like work expectations have also been
56 used in classifying entrepreneurs, the most famous typology being that of craftsman vs.
57 opportunistic (Smith, 1967). The craftsman was described among others by low social
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3 awareness and involvement, and a desire for autonomy rather than financial or status
4 achievement when starting a business (Katz, 1994). Opportunistic entrepreneurs had higher
5 tolerance of risk, desire for profit and growth, and orientation towards the future (Lafuente
6 and Salas, 1989). Westhead and Wright (1998) also posited that individuals who pursue
7 entrepreneurial careers for greater remuneration and/or status are more likely to be
8 opportunistic entrepreneurs. Especially in the context of family businesses, there are some
9 studies suggesting that extrinsic and social work values may be negatively associated with
10 entrepreneurially oriented behavior. Getz and Petersen (2005) described small family
11 business owners as being “craftsmen” or “lifestyle entrepreneurs”, being risk averse because
12 the entrepreneur must prioritize the opportunity to make a living for his or her family over
13 the potential growth of the firm. Miller and Le Breton-Miller (2011) also suggested that a
14 family breadwinner role identity may induce the owner to see the business as a source of
15 family financial security and reward, family reputation and careers for present and future
16 generations. They found this type of identity to be negatively related to EO. Alternatively, the
17 entrepreneurial role identity was described as growth-oriented, venturesome, and innovative.

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22 These notions suggest that intrinsic and status (prestige) work values could be positively
23 related to entrepreneurially oriented behaviors, whereas social and extrinsic work values may
24 have the opposite effect on EO. Thus we hypothesize the following:

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27 H1: Intrinsic and status work values are positively associated with EO behaviors, whereas
28 social and extrinsic work values are negatively associated with EO behaviors

29 30 31 *2.3 Attitudes towards growth and EO*

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33 Values are defined as abstract ideals (Rokeach, 1973), whereas attitudes are dispositions
34 towards certain objects and situations (Connor and Becker, 2003). Attitudes have been
35 widely studied in entrepreneurship research, most notably in studies applying the Theory of
36 Planned Behavior (TPB, Ajzen, 1991). The TPB postulates that attitudes, subjective norms
37 and perceived behavioral control are predictors of behavioral intentions and ultimately also
38 behavior. Attitudes in turn are based on beliefs about the expectancy and value of the
39 behavior in question. The majority of TPB applications in the entrepreneurship literature
40 have examined attitudes and intentions to choose entrepreneurship over alternative careers
41 (Engle *et al.*, 2010), but the TPB has also been applied to account for strategic orientations
42 like marketing orientation (Guido *et al.*, 2011). However, the importance of intention as a
43 mediating variable between attitudes and entrepreneurial behavior in small firm context can
44 be questioned, as in small or newly established firms entrepreneurial activities are dependent
45 on their founders and are usually informal and improvisational (Fini *et al.*, 2012). Like
46 innovation, risk-taking and to some extent also proactiveness can be seen as behaviors
47 instrumental to achieving the long-term survival and growth of the firm, we propose that the
48 entrepreneur’s attitudes towards growth or survival are important determinants of EO.

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53 The link between growth attitudes and entrepreneurially oriented behavior is already
54 established in the early typologies of small business owner-managers, where the term
55 “entrepreneur” is often used to describe managers pursuing growth. Carland *et al.* (1984)
56 identified two distinct types: entrepreneurs and small business owners. An entrepreneur
57 capitalizes on innovative combinations of resources primarily for purposes of profit and
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3 growth. A small business owner operates a business to further personal goals and to generate
4 family income. Stewart *et al.* (1998) studied the psychological characteristics of these two
5 types and found that entrepreneurs were higher in achievement motivation, risk-taking
6 propensity and preference for innovation. Therefore it is natural to assume a positive link
7 between growth attitudes and all dimensions of entrepreneurially oriented behavior, while the
8 opposite effect is to be expected between survival attitudes and EO. In particular it can be
9 assumed that survival-oriented managers would be likely to avoid risk-taking behaviors,
10 especially if the firm is already in the mature stage and thus the threat of bankruptcy is low.
11 Empirical studies have established that the first (one to) three years are the most critical time
12 for new firms as regards their survival, and the likelihood of total failure is much greater for
13 small businesses than larger firms (Davidsson and Dutia, 1991; Littunen, 2000; Storey and
14 Wyncarczyk, 1996). The entrepreneur's personality type and strategic choices have been
15 shown to be important factors for firm survival (Ciavarella *et al.*, 2004; Littunen, 2000;
16 Storey and Wyncarczyk, 1996).
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21 In light of the discussion above we hypothesize the following:
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24 H2: Attitudes towards growth are positively associated with EO, whereas attitudes towards
25 mere survival of the firm are negatively associated with EO
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27 *2.4 The mediating role of attitudes between values and EO*

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30 In the value-attitude-behavior framework, behavior is ultimately the manifestation of
31 people's fundamental values and corresponding attitudes (Connor and Becker, 2003).
32 Similarly, Dempsey (2009) argues that values result in attitudes that predispose to certain
33 behaviors. Shim *et al.* (1999) point out that many studies have focused on attitudes as an
34 explanatory factor for human behavior. This hierarchy has been widely recognized and
35 moreover empirically tested in a variety of areas. In management studies in a work related
36 context as Alexander (1977) showed that the job related attitudes of salesmen and faculty
37 members significantly predicted their behavior. Similarly, the findings of Shim *et al.* (1999)
38 indicated that personal values influenced career attitudes, which in turn directly affected
39 individuals' career related behavior. In the consumer behavior context (e.g. in natural food
40 shopping (Homer and Kahle, 1988) and online grocery shopping (Homer and Kahle, 1988;
41 Hansen, 2008)) findings indicated that the attitudes of consumers mediate the link between
42 their values and behavior. According to Shim and Eastlick (1998), abstract values have only
43 an indirect effect on behavior through more concrete mediating factors such as domain-
44 specific attitudes. Furthermore, the model has been empirically tested in the environmental
45 context (Dembkowski and Hanmer-Lloyd, 1994; Cottrell, 2003) and Milfont *et al.* (2010)
46 also tested the cross-cultural validity of the model and provided empirical support for using
47 this model across cultures.
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52 As the value-attitude-behavior framework is a generally accepted and valid construct (Uy,
53 2003), we argue that this cognitive hierarchy model is also equally valid among
54 entrepreneurs as it is among other people. We therefore propose that the influence of work
55 values flows from abstract values to mid-range attitudes to specific entrepreneurial behaviors.
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3 Many studies have shown that attitudes towards the growth and survival of the firm vary
4 among entrepreneurs. There are entrepreneurs who do not pursue growth and for whom
5 survival is often enough (Gundry and Welsch, 2001; Nummela *et al.*, 2005; Wiklund *et al.*,
6 2003). Underlying these differences are the entrepreneurs' work values, which affect their
7 strategy making; entrepreneurs may differ in terms of goals, attitudes, and motivations
8 (Carsrud and Brännback, 2011). According to the empirical findings of Poutziouris *et al.*
9 (1999), strong attitudes towards growth are related to the entrepreneur's desire to achieve
10 more profits to be used in the expansion of the firm, and to be recognized as a manager of a
11 successful business. Thus we expect intrinsic and status work values to be positively related
12 to growth attitudes. On the other hand, entrepreneurs more interested in the mere survival of
13 the firm can be assumed to be more motivated by social and extrinsic work values as they
14 perceive the firm as a means of providing sufficient income for the owner and his family
15 (Getz and Petersen, 2005; Miller and LeBreton-Miller, 2011).
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20 Therefore, we hypothesize the following:
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22 H3: Intrinsic and status work values are positively related to attitudes towards a firm's
23 growth. Extrinsic and social work values are positively related with attitudes towards a
24 firm's survival.
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27 H4: The positive effects of intrinsic and status work values on entrepreneurial orientation are
28 mediated by attitudes toward a firm's growth. The negative effects of extrinsic and social
29 work values on EO are mediated by attitudes towards a firm's survival.
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32 Figure 1 summarizes our framework of the analysis and the anticipated linkages between the
33 values and attitudes of owner-managers and the level of entrepreneurial orientation manifest
34 in their firms' behavior.
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37 **INSERT FIGURE 1. ABOUT HERE**
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40 41 42 **3 RESEARCH DESIGN**

43 44 *3.1 Sampling and data collection*

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46 The empirical data were drawn from a mail survey conducted in spring 2009 by means of a
47 structured questionnaire. The questionnaire consisted of a set of validated items mainly used
48 in earlier studies. The themes in the questionnaire varied from legal environment to
49 entrepreneurship and the effects of the global downturn. The initial population consisted of
50 Finnish small private limited companies (they typically have few shareholders and are
51 usually owner-managed family businesses) with sales turnover between one and ten million
52 Euros.
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56 The empirical data were analyzed in a multiple industry setting, for greater generalizability.
57 A total of 13,495 firms were identified from the financial statement database Voitto+, and a
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3 systematic random sample of 1,026 firms was drawn. The pre-tested survey questionnaire
4 with an introductory cover letter was mailed to owner-managers or CEOs, who were assured
5 of confidentiality and promised a summary of the results. A reminder was sent to those who
6 had not responded within two weeks. Final responses were received from 193 companies,
7 yielding a satisfactory effective response rate of 19% (193/1026). It was possible to obtain
8 financial information on the companies from the Voitto+ database; these financial measures
9 are based on the financial statements for the years 2005 to 2009. Although we used the firms'
10 financial information, anonymity was ensured because data was analyzed and reported in a
11 format permitting no identification of individual respondents or their businesses.
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15 Non-response bias was examined by comparing the early (first-round) respondents with the
16 late responders (second-round) on the assumption that there were no differences between
17 early and late responders (Armstrong and Overton, 1977; Covin and Slevin, 1989). No
18 significant differences were found between these groups in the distributions of the sum
19 variables. Another test for the representativeness of our data was a comparison of responding
20 and non-responding firms in terms of size, which was retrieved from the Voitto+ database for
21 the full sample of 1,026 firms. The size distributions of non-responding and responding firms
22 turned out similar ($\text{Chi}^2=1.62$). Using self-reported data from single informants may entail a
23 risk of common method bias (Podsakoff *et al.*, 2003). However, the owner-manager is
24 considered to be the best source of information about the strategic vision and managerial
25 practices, which would be very hard to measure without some degree of subjectivity. The
26 measurement of work values especially necessitates subjective evaluation and reporting.
27 Furthermore, researchers of entrepreneurship often use self-reports and these have been
28 shown to be reliable (Chaganti *et al.*, 2002).
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33 *3.2 Measures*

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35 We utilized nine items to capture the three dimensions of EO conceptualized by Miller
36 (1983). These items are based on the work of Covin and Slevin (1990). However, the items in
37 our study were slightly adapted to be more appropriate to the context of small enterprises in
38 Finland.
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40

41 *Work values*

42 In our study the work values were measured on a scale adapted from three very similar
43 scales used by Lyons *et al.* (2006), Lafuente and Salas (1989), and Elizur (1984). They found
44 that the 22 items weight the following five factors: intrinsic work values, extrinsic work
45 values, status work values, altruistic work values and social work values. Some of the
46 original items were excluded because they were not suitable for small Finnish firms. The
47 final measure included 19 items, all assessed on a five-point Likert scale with the anchors 1 =
48 not at all important, 5 = of utmost importance.
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52 *Growth and survival attitudes*

53 The growth and survival attitudes were measured for five Likert-scaled items adapted from
54 Nummela *et al.* (2005), and Runyan *et al.* (2008). The growth attitude was defined as the
55 degree to which the entrepreneurs intended to engage in specific strategies to increase and
56 expand their businesses. Activities measured included adding a new product or service,
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expanding operations to new customer groups, and aiming at growth without jeopardizing profitability. The survival attitude is the degree to which entrepreneurs pursue stability. The items included satisfaction with the present size of the firm and the aim to keep the operation of the firm sustainable.

Control variables

As there is reason to believe that the manifestation of an organization's EO may change as a function of the firm's level of development and stage of growth (Wales *et al.*, 2011; Miller and Le Breton-Miller, 2011), controlling for age and size is usually needed in studies attempting to model the antecedents of EO. We measured firm size as the average annual sales over the five-year period before the time of the survey. Age was omitted from the final analysis as the vast majority (76%) of the respondents reported that their company was in the mature stage of their company life cycle. (A model including age was also tested: age did not have statistically significant effects and the other relationships remained the same as in model reported in the study.)

4 RESULTS

4.1 Descriptive statistics and correlations

The descriptive results from 193 respondents are shown in Table 1. We had chosen firms operating in a wide range of (different) industries, with sales turnover between one and ten million Euros. The minimum value is not within the chosen range, because we sampled the firms on the basis of their financial statements for 2007 and our data consist of financial statements from 2005 to 2009. The sales distribution of the respondent firms was somewhat skewed as the mean was about 2,480,000€ and the median was only 1,775,000€. Although small firms often experience survival difficulties, the mean age of the firms was 20 years and median was close to this. The life cycle phase of most of the businesses (in the respondents' own estimation) was established operations (76%) and only 1% reported that their business was in the early stage. Eighteen percent of the firms were in the growth stage and 5% were declining. A majority (59%) of the respondents had established their firms by themselves and 21% had bought their businesses. The most prevalent (66% of firms) ownership structure was 2-5 owners and 65% of respondents considered their businesses to be family businesses.

The results in Table 1 indicate that there are distinct differences in the level of EO among Finnish owner-managers. In terms of business strategic goals, the main emphasis is on profitability, and the respondent firms have slightly more positive attitudes towards survival than growth. The *extrinsic* and *intrinsic* work values seem to be more important for Finnish entrepreneurs than *status* or *social* work values.

INSERT TABLE 1. ABOUT HERE

The correlations in Table 2 show that turnover (sales 05-09) is positively related to EO and growth attitudes and negatively related to survival attitudes. It seems logical that EO is

positively related to growth attitude and negatively related to survival attitude. There are also positive statistically significant correlations between EO and intrinsic, status, and social work values. Growth attitude is positively related to extrinsic and intrinsic work values and survival attitude is negatively related to the intrinsic work value.

INSERT TABLE 2. ABOUT HERE

4.2 Measurement model

To estimate our model and to test the associated research hypotheses, we used the partial least squares (PLS) approach using SmartPLS 2.0 software (Ringle *et al.*, 2005). PLS is an appropriate method in this context since it yields more stable estimators with small sample sizes and can also operate with indicators that do not follow the normal distribution (Harms *et al.*, 2010).

Table 3 presents each indicator used in our analysis, the factor loading on these and the *t*-value, which indicates the significance of the factor loading. The *t*-values were obtained using a bootstrap algorithm (193 cases and 3,000 iterations). Closer examination of the factor loadings reveals that 20 items out of the total number of 30 meet the heuristic criteria for convergent validity, i.e., items with loadings of 0.7 or more are accepted (Barclay *et al.*, 1995). On the other hand, the value of 0.40 has also been argued to be a minimum acceptable level for factor loading (Hulland, 1999). In our case only one item got a loading lower than 0.40. Apart from one indicator (SO01), all the other factor loadings were statistically significant at the 1% risk level. The tolerance values varied between .964 and .999, implying that multicollinearity was not a problem.

INSERT TABLE 3. ABOUT HERE

Besides the indicator quality, Table 3 also shows how the indicators are loaded on the constructs. Four items related to innovativeness, two items related to proactiveness and three items related to risk-taking form the EO construct. For the work values we found four factors grouped according to the factor structure defined by Lyons *et al.* (2006): intrinsic work values (five items), extrinsic work values (three items), status work values (three items) and social work values (four items). The growth attitude is formed by three items and the survival attitude by two items.

To assess the reliability of the constructs described above the composite reliability and internal consistency reliability (Cronbach's alpha) are presented in Table 4. Apart from these two aforementioned measures, the diagonal elements in the table are the square root of the shared variance between the constructs and their measure the Average Variance Extract (AVE) and the off-diagonal elements are correlations between constructs.

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4 All the constructs exhibit composite reliability over 0.7 and in most of the cases the
5 Cronbach's alpha is also more than 0.7 or slightly below it, indicating that the measurement
6 errors were relatively small. Kijnsanayotin *et al.* (2009) note that the discriminant validity
7 shows the amount by which a particular construct differs from other constructs. In PLS path
8 modeling analysis discriminant validity is adequate when a construct shares more variance
9 with its measures than with other constructs in the model. The Average Variance Extract
10 (AVE) is used as a measure of variance shared between a construct and its measures. The
11 AVE should exceed the level of the variance shared between the construct and other
12 constructs in the model. The correlation matrix for the constructs is also presented in Table 4.
13 The square roots of the AVEs, offering a metric comparable to a correlation (the square root
14 of the variance shared between two variables (Kijnsanayotin *et al.* (2009)), are on the diagonal
15 of the matrix. For sufficient discriminant validity, numbers on the diagonal should be higher
16 than the off-diagonal numbers in the corresponding rows and columns. The results indicate
17 sufficient discriminant validity for all the constructs in our model. In the case of size a
18 diagonal value of 1 indicates that only one measurement item was related to this construct.
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24 **INSERT TABLE 4. ABOUT HERE**

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26 27 28 29 *4.3 Structural model*

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32 Structural model evaluation is the assessment of a predicative or causal relationship between
33 constructs in the model (Kijnsanayotin *et al.*, 2009). Harms *et al.* (2010) point out that a key
34 criterion for evaluating a structural model is the coefficient of determination R^2 . Moreover,
35 they mention that an R^2 of over 67% can be considered good and values around 19% weak.
36 In our case, 42.7% of the variance of EO, 14.2% of the variance of growth attitudes and 6.5%
37 of the variance of survival attitudes can be explained. The results indicate that in the case of
38 EO the coefficient of our model can be regarded as fairly good, in the other cases R^2 s are
39 weak and very weak.
40
41

42
43 The path coefficient expresses the strength of the relationship between two constructs. Table
44 5 contains the hypothesized relationships in our model (presented in graphical form in
45 Appendix 1), their path coefficients and t -values. Harms *et al.* (2010) argue that a path
46 coefficient below 0.1 (absolute value) can be regarded as an insignificant relationship. Hence
47 a path with a coefficient below 0.1 (absolute value) leads to the rejection of the related
48 hypothesis. With our model it seems that there are statistically significant and strong
49 relationships between the constructs. Intrinsic work values especially seem to have a strong
50 positive relationship with entrepreneurial orientation and growth attitude. Furthermore, in
51 our model the growth attitude has the strongest relationship with the entrepreneurial
52 orientation. Hence, our hypotheses 1, 2, and 3 are partially upheld.
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56 **INSERT TABLE 5. ABOUT HERE**

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To examine the unique and separate contributions of each of the latent exogenous variables in explaining an endogenous variable, we check for the effect size f^2 . Cohen (1992) sets the following intervals for the effect size: large ($f^2 \geq 0.35$), medium ($0.15 < f^2 < 0.35$) and small ($0.02 < f^2 < 0.15$). In our study the f^2 -values indicate that a large amount ($f^2 = 0.75$) of the variance in EO is explained, a medium amount ($f^2 = 0.17$) of the variance in growth attitude is explained and for the remaining variable, survival attitude, a small amount ($f^2 = 0.07$) of the variance is explained in the model.

To ascertain whether the influence of an independent variable on a dependent variable is significantly carried by a mediator variable, we performed Sobel's test recommended by Baron and Kenny (1986). The results in Table 6 show that the growth attitude significantly mediates the influence of intrinsic values on entrepreneurial orientation. Hence, there is a significant indirect effect and our hypothesis 4 is partially supported.

INSERT TABLE 6. ABOUT HERE

4.3 Discussion and conclusions

The aim of this study was to increase our understanding of entrepreneurial orientation in the small business context. More precisely, we looked into the meaning of owner-managers' work values for EO behavior using growth and survival attitudes respectively as mediators. This study contains two important novelties with regard to the EO literature as we examine the psychological antecedents of entrepreneurial orientation and introduce the values-attitudes-behavior framework into the context of entrepreneurship. These aforementioned issues enhance the contribution and originality of this study.

We respond to the recent call for micro-foundations, i.e. an individual level cognitive hierarchy in explaining entrepreneurial behavior by introducing the personal work values of the owner-manager as predictors of entrepreneurial behaviors. In line with the social psychology literature on personal values we proposed that they are indirectly linked to actual behavior through attitudes. To the best of our knowledge this study was the first to apply values-attitudes-behavior framework in the context of entrepreneurship.

Our findings concur with those of earlier studies showing the importance of cognitive factors in predicting entrepreneurial actions (Wiklund, 1999; Pines *et al.*, 2012), and also with the recent calls for research on the micro-foundation of strategy (Abell *et al.*, 2008) and entrepreneurship research (Fini *et al.*, 2012). The findings of this study confirmed our expectations by demonstrating that EO behaviors can to a large extent be explained by the personal characteristics of owner-managers. The study revealed that owner-managers' work values and their attitudes towards business goals (i.e. growth and survival) are significantly related to EO. Our study demonstrated the mediator role of growth attitude in the relationship between intrinsic work values and EO, implying that the values-attitudes-behavior

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3 framework is also a valid construct in the context of work values and entrepreneurial
4 behavior.
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7 However, our results showed that not all types of work values are salient predictors of
8 entrepreneurial attitudes and behaviors. The important role of intrinsic work values is in line
9 with studies reporting that entrepreneurs exhibit higher levels of intrinsic work values than
10 other types of managers (Fagenson, 1993). Our results corroborate that view by showing that
11 among entrepreneurs those who are more intrinsically motivated also tend to pursue more
12 growth and exhibit more innovative, proactive and risk-taking behavior. Status work values
13 have no direct effects on entrepreneurial behaviors but the indirect causal mechanisms
14 through growth attitudes were positive and close to statistical significance, implying that
15 managers seeking status and prestige from their work engage in entrepreneurial behaviors in
16 order to expand the firm. Somewhat surprisingly, entrepreneurs' extrinsic work values, while
17 generally important for our respondents, did not differentiate between growth vs. survival-
18 pursuing attitudes or entrepreneurial behaviors. This may be due to potential linkages
19 between intrinsic and extrinsic values: some entrepreneurs may exhibit a high level of
20 extrinsic values but actually see them more as instrumental to the achievement of more
21 profound intrinsic values, which in turn drive behavior (Hemingway, 2005).
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26 Social work values affected neither the entrepreneurs' attitudes nor their behavior. One
27 possible explanation may originate in the structure of the value framework introduced by
28 England (1978). England proposed that values can be differentiated between conceived and
29 non-relevant values while these non-relevant values have little or no impact on behavior,
30 whereas these conceived values are translated into behavior with high probability. Similarly,
31 Rokeach (1968) argued that a systematic ordering of the values leads to a situation in which
32 there are two related sets of values: terminal values and instrumental values, the latter are
33 used to achieve the long-term terminal values. This could be the case with the social work
34 values, either they are non-relevant values with no effect on the actual behavior or they are
35 instrumental values used to achieve the long term terminal goal (values).
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39 Our study also has some implications for policymakers and practitioners. Entrepreneurial
40 activities and start-ups play a crucial role in many countries as they are vital for economic
41 growth and the countries' well-being. Given this importance, any effective public policy
42 intended to promote new firm creation or the entrepreneurial growth of existing small
43 businesses will have to recognize the heterogeneity of entrepreneurs and identify the
44 potential or existing entrepreneurs who are likely to be affected by such policies (Lafuente
45 and Salas, 1989). When the policies are geared to new firm creation, it is actually only the
46 personal characteristics, work values and aspirations which can be observed and used for
47 developing tailored policies. However, recognizing and acknowledging the meaning of work
48 values and growth aspirations could also be useful for small business owners and their key
49 stakeholders. For example, they may be relevant in the face of decisions about external
50 financing or ownership arrangements.
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53
54 We concede that the present study has some limitations. As our study focused on Finland, it
55 remains to be seen if our findings can be transferred to other countries. Nevertheless, as the
56 focus of our study is not country-specific and as we based our theoretical argumentation on
57 international scholarly research, we have no indication that our findings could not be
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replicated in entrepreneurial orientation studies in other countries. In this exploratory study we did not control for sector differences. However, as sector characteristics may influence the drivers of EO behavior, we strongly encourage future researchers to investigate if the results can be replicated when considering sector characteristics. Furthermore, our rather small sample consists of fairly mature and conventional small firms. The type of the sample firms may have an effect on how the work values affect behavior, hence this limitation has an interesting implication for future research as focusing on new ventures or social enterprises would offer a different perspective on the topic. An additional limitation of this study is the survivorship bias, as this study only examined entrepreneurs currently in business, an assessment of those entrepreneurs who were not successful would enhance the understanding of entrepreneurial orientation. An examination of these limitations and adding environmental and cultural factors into the analyses could have a positive influence on the design of future studies.

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Appendix

INSERT APPENDIX 1. ABOUT HERE

For Review Only

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Table 1. Descriptive statistics

Variable	Mean	Std. dev.	Min	Max	Median
Firm age	20.0	12.0	4	107	18.0
Sales (million €), mean 2005-2009	2.48	1.84	0.4	9.79	1.77
EO	3.32	0.69	1.44	4.89	3.44
Growth attitudes (GA)	3.53	0.87	1.00	5.00	3.67
Survival attitudes (SA)	3.74	0.84	1.00	5.00	4.00
Extrinsic work values	4.01	0.76	2.00	5.00	4.00
Intrinsic work values	4.24	0.53	2.40	5.00	4.20
Status work values	3.34	0.83	1.00	5.00	3.33
Social work values	3.11	0.84	1.25	5.00	3.25

Table 2. Correlation matrix

Variable	1	2	3	4	5	6	7
1 sales 05-09	1						
2 EO	.201***	1					
3 GA	.161**	.453***	1				
4 SA	-.036	-.264***	-.355***	1			
5 extrinsic	-.066	.071	.172**	.040	1		
6 intrinsic	.044	.404***	.256***	-.171**	.143*	1	
7 status	.032	.251***	.085	.014	.339***	.226***	1
8 social	-.082	.136**	.032	.159**	.209***	.131*	.212***

*** p< 0.01, ** p< 0.05, *p<.10

Variables: 1 sales mean 2005-2009, 2 EO, 3 growth attitudes, 4 survival attitudes, 5 extrinsic values, 6 intrinsic values, 7 status values, 8 social values

Table 3. Operationalisations of constructs

Construct	Indicator	Description	Factor Loading	t-value
Size	avgsale	5 years sales average	1.000	-
EO	INN01	In our company, new ideas come up all the time.	0.749	18.733
	INN02	Continuous renewal and innovation are important for our company	0.824	34.925
	INN03	Lately we have launched many new products/ services.	0.709	15.110
	INN04	We invest heavily in developing new products, services and business practices.	0.793	26.499
	PRO01	Our company often acts before the competitors do.	0.644	10.000
	PRO02	We aim at being at the forefront of development in our business sector.	0.746	19.117
	RISK01	We prefer the cautious line of action even if some opportunity might be lost that way. (Reversed)	0.515	7.255
	RISK02	Bold action is necessary to achieve our company's objectives.	0.628	11.667
	RISK03	In uncertain situations we are not afraid to take substantial risks.	0.403	5.417
Extrinsic	EXT01	I can get a secure income from the business	0.875	6.132
	EXT02	I can get a sufficient monetary reward for my work	0.908	8.048
	EXT03	I can obtain wealth through the business	0.758	3.912

Intrinsic	INT01	The work offers challenges where I can apply my skills	0.766	15.193
	INT02	The work is inspiring	0.792	18.137
	INT03	I can learn or create something new	0.767	18.048
	INT04	I can affect the organization's success	0.598	8.175
	INT05	I can enjoy my work	0.632	10.323
Status	STA01	I can manage and organize other people's work	0.697	4.332
	STA02	The work is respected by others	0.738	5.059
	STA03	I can advance in my career	0.871	6.766
Social	SO01	I can work in a business owned by my family	0.387	1.390
	SO02	The work has an impact on the society	0.768	3.539
	SO03	I can offer employment to others	0.781	3.932
	SO04	I can leave a solid business to the next owner generation	0.685	3.688
GrowhtA	GA01	Our company aims at growth without compromising profitability	0.733	14.954
	GA02	We are going to expand our business to new customer segments	0.724	10.766
	GA03	We are going to expand our product /service offerings	0.824	24.168
SurvivalA	SUR01	Our company is optimum size as it is	0.896	8.672
	SUR02	Our main objective is to keep the business stable	0.802	4.225

Table 4 Measurement model evaluation

	Composite Reliability	Cronbachs Alpha	EO	Extrinsic	Growht	Intrinsic	Size	Social	Status	Survival
EO	0.88	0.85	0.68							
Extrinsic	0.89	0.81	0.07	0.85						
Growht	0.81	0.64	0.56	0.21	0.76					
Intrinsic	0.84	0.76	0.43	0.15	0.31	0.72				
Size	1.00	1.00	0.22	-0.08	0.20	0.03	1.00			
Social	0.76	0.61	0.20	0.20	0.09	0.18	-0.01	0.67		
Status	0.81	0.70	0.27	0.33	0.24	0.25	0.03	0.29	0.77	
Survival	0.84	0.62	-0.26	0.08	-0.39	-0.18	-0.06	0.12	-0.03	0.85

Table 5. Structural model

Relationship	Path coefficient	t-value	
Extrinsic -> EO	-0.094	1.424	
Intrinsic -> EO	0.250	3.281	***
Status -> EO	0.089	1.137	
Social -> EO	0.123	1.480	
GrowhtA -> EO	0.427	5.740	***
SurvivalA-> EO	-0.051	0.724	
Size -> EO	0.117	1.935	*
Extrinsic -> GrowhtA	0.130	1.503	
Intrinsic -> GrowhtA	0.264	3.775	***
Status -> GrowhtA	0.141	1.696	*

Social -> GrowhtA	-0.027	0.313	
Extrinsic -> SurvivalA	0.100	0.681	
Intrinsic -> SurvivalA	-0.204	2.624	***
Status -> SurvivalA	-0.058	0.509	
Social ->SurvivalA	0.155	1.041	

*** $p < 0.001$; ** $p < 0.05$; * $p < 0.1$

Table 6 Sobel's test for the significance of the indirect effect

Relationship	Test statistic	p -value
Extrinsic-GrowthA-EO	1.454	0.146
Intrinsic-GrowthA-EO	3.155	0.002
Status-GrowthA-EO	1.627	0.104
Social-GrowthA-EO	0.312	0.755
Extrinsic-SurvivalA-EO	0.496	0.620
Intrinsic-SurvivalA-EO	0.698	0.485
Status-SurvivalA-EO	0.416	0.677
Social-SurvivalA-EO	0.594	0.552

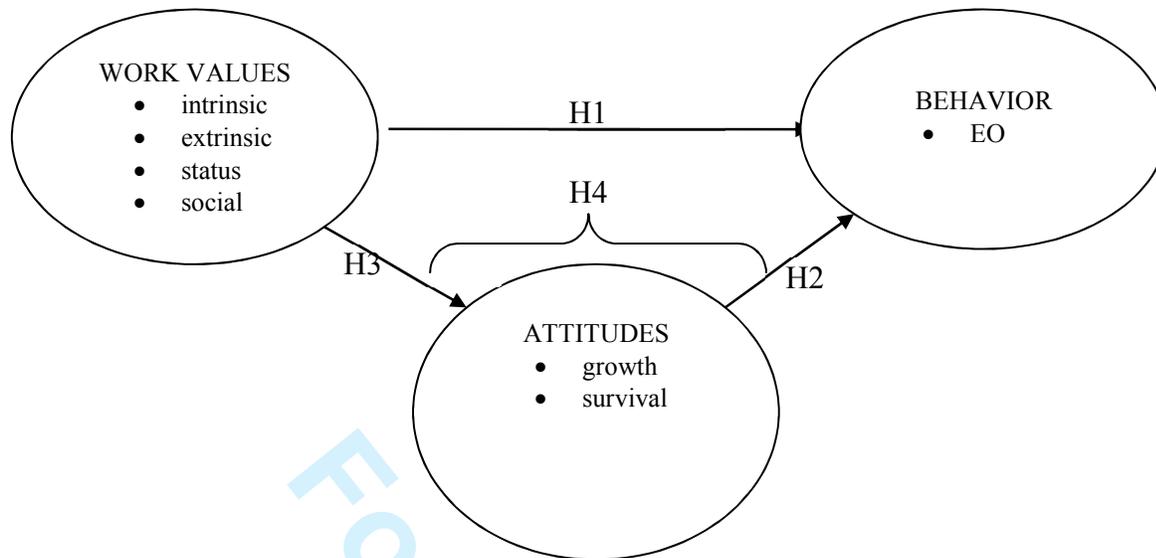
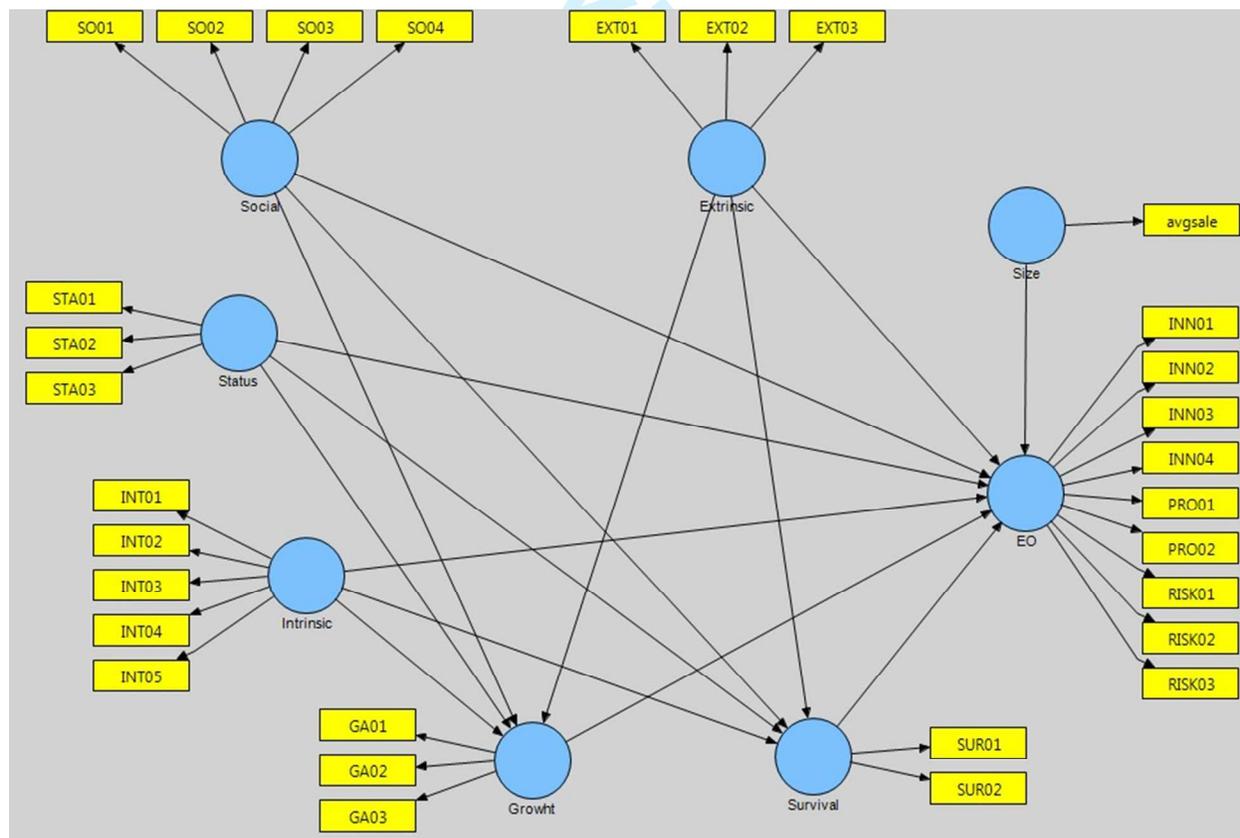


Figure 1. Framework of the analysis

APPENDIX 1
Structural model



ARTICLE V

Soininen, J., Puumalainen, K., Sjögrén, H. and Syrjä, P. (2012)

**WHAT DRIVES EO IN SMALL FIRMS? ROLES OF OWNER-MANAGER AND
FINANCIAL CONDITIONS.**

Presented in the proceedings of the 17th Nordic Conference on Small Business Research,
Helsinki, Finland, May 23–25, 2012

What drives EO in small firms? Roles of the owner-manager and financial conditions

Juha Soininen¹, Kaisu Puumalainen², Helena Sjögrén³, Pasi Syrjä⁴

Abstract

Our study investigates the drivers of entrepreneurially oriented behavior (EO) in Finnish small owner-managed firms. In this work we focus on entrepreneur's work values, experience as entrepreneurs and the firm's financial slack and financial conservatism. The empirical data were drawn from a mail survey of 193 Finnish owner-managed small companies. The linear regression analyses revealed that owner-managers' intrinsic and status work values and experience are the strongest drivers of EO. A firm's financial characteristics did not affect the levels of EO.

1. Introduction

Today firms do business in complex business environments where fast and remarkably inconsistent changes are constantly present (Yaghoubi and Naroei, 2011). To succeed and outperform their rivals in such harsh business conditions firms need specific skills or strategic capabilities and postures. One well known and widely studied strategic posture is entrepreneurial orientation (EO). Entrepreneurial orientation, compounded of *innovativeness*, *proactiveness* and *risk-taking*, has been found to positively contribute to a firm's performance, growth and survival. (Covin, Green and Slevin, 2006; Lumpkin and Dess, 1996; Soininen et al., 2012)

Since the early 1980's, the entrepreneurial orientation has gained popularity among scholars in the field of entrepreneurship, becoming one of the most important and established concepts within the field (Wales et al., 2011). Wiklund and Shepherd (2011) characterize the approach of vast the majority of prior EO studies as "EO-as-advantage" -point of view implying that it is advantageous for firms to pursue an EO. Many scholars have studied the relationship between EO and firm's performance measured from many different angles, for example sales growth, profitability, innovation generation and the degree of internationalization, and found it to be positive. (Lumpkin & Dess, 2001; Pérez-Luño et al., 2010; Javalgi and Todd, 2010; Wiklund et al., 2003)

Wiklund and Shepherd (2011) argue that the "EO-as-advantage" research might have reached its point of saturation with little more to learn. Therefore they suggest that there is a room for a new stream of valuable EO research. One possible new avenue of research on EO is a fine-grained investigation of the *organizational characteristics and resources* supporting entrepreneurial orientation (Miller, 2011). Furthermore, Miller and Le Breton-Miller (2011)

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pointed out that there is room for studies related to the influence of different *types of owners* on EO.

Our paper therefore aims to increase the understanding of entrepreneurial orientation especially in the small business context, where a manager's role is vital. In this paper we focus on the owner-manager's personal values, business founding experience, and firm-level financial factors and examine their effect on the level of entrepreneurial orientation.

The paper is structured as follows: After the introductory section comes a section defining the concept and reviewing the relevant literature and presenting the research hypotheses. Thereafter we present a description of the methodology used in the empirical research. In the next section the main findings are presented and Section 5 summarizes the results along with their implications.

2. Theoretical framework and hypotheses

A substantial amount of research has examined the concept of entrepreneurial orientation (EO) thus it has become a central concept in the domain of entrepreneurship (Covin, Green and Slevin, 2006). According to Covin et al. (2006) the concept of entrepreneurial orientation has become a central concept in the domain of entrepreneurship as a remarkable amount of research has been done with the concept. Rauch et al. (2009) confirm this notion showing in their meta-analysis that more than 100 studies related to entrepreneurial orientation have been published. This has led to a wide acceptance of the conceptual meaning and relevance of entrepreneurial orientation.

The Dimensions of EO

According to Miller (1983) the three vital dimensions of EO are *innovativeness*, *risk taking* and *proactiveness*. Since the early 1980's these three dimensions have been consistently used within the field of entrepreneurship (Dimitratos et al., 2004).

Innovativeness is described as follows: Innovativeness reflects a firm's propensity to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products, services, or technological processes. Innovativeness represents a basic willingness to depart from existing technologies or practices and venture beyond the current state of the art (Lumpkin and Dess, 1996). Lumpkin and Dess (1996) also argue that innovativeness is an important component of EO, because it reflects important means by which firms pursue new opportunities. The strategic risk taking can be divided into three different types, such as venturing into the unknown, heavy borrowing, and/or committing substantial amounts of corporate assets in uncertain environments (Baird and Thomas, 1985). Likewise, Lumpkin and Dess (1996) note that entrepreneurially oriented firms are frequently typified by risk-taking behavior, such as incurring heavy debt or making significant resource commitments in the interests of obtaining high returns by seizing opportunities in the marketplace. Proactiveness is described as an opportunity-seeking, forward-looking perspective characterized by the introduction of new services and products ahead of the competition and acting in anticipation of future demand (Rauch et al., 2009).

In addition to these three most commonly used dimensions Lumpkin and Dess (1996) note that two additional dimensions *competitive aggressiveness* and *autonomy* are also relevant components of EO. Lumpkin and Dess (2001) define these two additional dimensions as

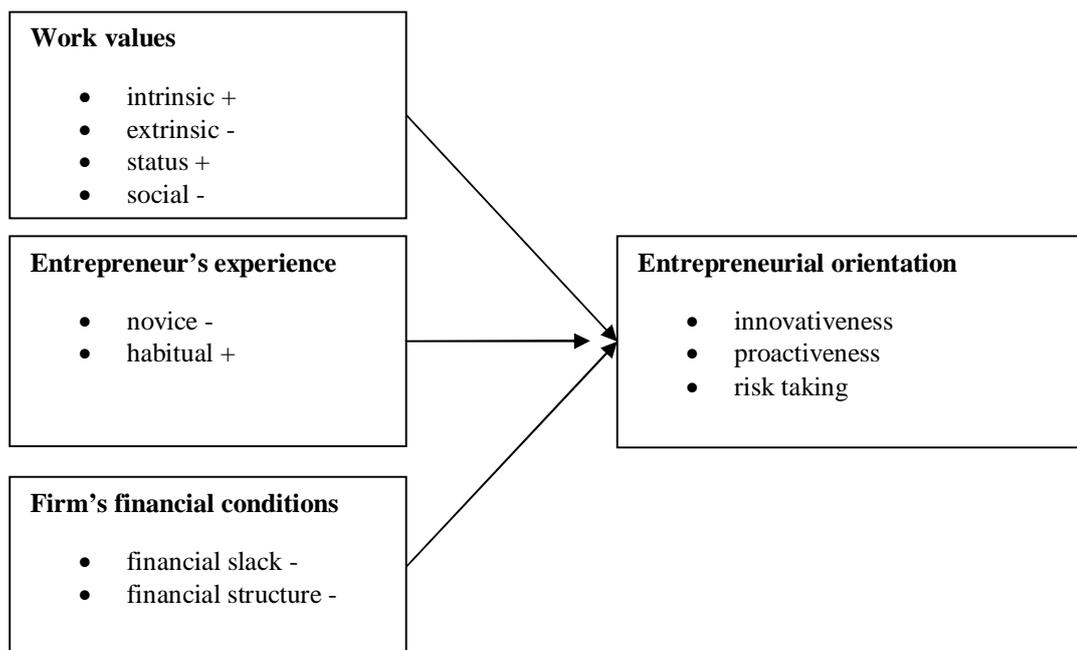
follows: Competitive aggressiveness is said to reflect the intensity of a firm's effort to outperform industry rivals, characterized by a strong offensive posture and a forceful response to competitor's actions. Autonomy is independent action by an individual or team aimed at bringing forth a business concept or vision and carrying it through to completion.

Rauch et al. (2009) argue that the essential dimensions of EO are typically very much interrelated with each other, which leads to combining these dimensions into one single factor. In the EO literature there is no firm consensus on how the EO construct should be handled. On the one hand, Covin and Slevin (1989) argue that the EO construct is best viewed as a unidimensional concept and on the other hand, scholars such as Lumpkin and Dess (2001) suggest that the dimensions of EO may relate differently to firm performance should therefore be treated as separate components. In this study we use the unidimensional approach because it is more commonly used in research.

The conceptual framework

Figure 1 presents the conceptual framework of this paper. The relevance of each of the boxes on the left hand side in the figure is explained below.

Figure 1 Conceptual framework



Work values

Owners of small businesses have a major influence on the firm's strategy. The focal role of the owner-manager has long been recognized in the small business and entrepreneurship literature, and there is also empirical evidence that entrepreneurs are not homogeneous in terms of professional expectations or values. Numerous studies have described entrepreneurial performance in order to isolate values, motivations and other personal dimensions that are characteristic of entrepreneurs (Chaganti, Cook and Smeltz, 2002).

Work values can be defined as “generalized beliefs about the desirability of certain attributes of work and work-related outcomes” (Lyons et al., 2006). They are relatively enduring, like general human values (Rokeach, 1973), hierarchically ordered in the individual’s mind (Lyons et al., 2010) and serve as criteria when making important work-related decisions. Several different work value typologies have been presented, but there appears to be a consensus on at least two fundamental types of values: firstly, *intrinsic*, cognitive, immaterial or expressive values pertain to the inherent psychological satisfactions of work, such as challenge, variety, self-development or intellectual stimulation. Secondly, *extrinsic*, instrumental or material values relate to remuneration, benefits, job security and comfort (e.g. Lyons et al., 2010; Elizur, 1984; Vinken, 2007). Other types of work values include *status* (prestige) values relating to status, influence and power, *altruistic* values involving the desire to help others and make a contribution to society, and *social* values pertaining to affective relations with other people (Lyons et al., 2010).

In the entrepreneurship and small business literature studies explicitly measuring work values are mostly limited to using work values as a predictor of career choice, in particular comparative studies on the work values of business founders vs. other careers have been conducted and generally business founders have exhibited higher levels of intrinsic values (Fagenson, 1993). Some studies have shown that the work values of managers are related to strategic business choices such as growth (Singh, 1989; Lafuente and Salas, 1989) and adaptability vs. rigidity (Smith and Miner, 1983), but there are also contradictory findings (Olson and Currie, 1992).

The work value dimensions or closely related concepts like work expectations have also been used in classifying entrepreneurs, the most famous typology being that of craftsman vs. opportunist (Smith, 1967). The craftsman was described among others by low social awareness and involvement, and a desire for autonomy rather than financial or status achievement when starting a business (Katz, 1994). Opportunistic entrepreneurs exhibited a higher tolerance of risk, desire for profit and growth, and orientation towards the future (Lafuente and Salas, 1989). Westhead and Wright (1998) posited that individuals who pursue entrepreneurial careers for higher remuneration and/or status are more likely to be opportunistic entrepreneurs. Especially in the context of family businesses, there are some studies implying that extrinsic and social work values might be negatively associated with entrepreneurially oriented behavior. Getz and Petersen (2005) described small family business owners as being “craftsmen” or “lifestyle entrepreneurs”, being risk averse because the entrepreneur must prioritize the possibility of making a living for his or her family ahead of the potential growth of the firm. Miller and Le Breton-Miller (2011) also suggested that the family nurturer role identity may induce the owner to see the business as a source of the family’s financial security and reward, of family reputation and of careers for present and future generations. They found this type of identity to be negatively related to EO. Alternatively, the entrepreneurial role identity was described as growth-oriented, venturesome and innovative.

These notions suggest that intrinsic and status work values could be positively related to entrepreneurially oriented behaviors, whereas social and extrinsic work values might have the opposite effect on EO. However, there is still limited evidence and the specific effects on EO need to be explored.

Hypothesis 1: Intrinsic work values are positively related to entrepreneurial orientation

Hypothesis 2: Extrinsic work values are negatively related to entrepreneurial orientation

Hypothesis 3: Status work values are positively related to entrepreneurial orientation

Hypothesis 4: Social work values are negatively related to entrepreneurial orientation

Entrepreneur's business founding experience

In the entrepreneurship literature it has long been acknowledged that the fundamental understanding of entrepreneurial wealth creation requires analysis of different types of small business owner-managers. Given the existence of prior business ownership experience, entrepreneurs have been classified as habitual (Starr and Bygrave, 1991), serial (MacMillan, 1986) or portfolio (Westhead and Wright, 1998) entrepreneurs. By contrast, novice entrepreneurs are individuals with no prior business ownership experience, either as a business founder, inheritor or as a purchaser of an independent business (Westhead et al., 2003). Among the habitual entrepreneurs, serial entrepreneurs are people who own one business after another but effectively only one business at a time, whereas portfolio owners own multiple businesses at a time (Westhead and Wright, 1998).

The existing research on habitual entrepreneurship has dealt with definitional issues, the prevalence of the phenomenon, motivation, demographic characteristics, work experience, managerial decision-making, and the performance of novice vs. habitual entrepreneurs (Wiklund and Shepherd, 2008). Based on samples of more than 350 firms in the UK, Westhead and co-workers have argued that drawing on their previous experience, habitual entrepreneurs may perceive a wider range of opportunities and create new business entities as a means of diversifying their activities. Establishing a new business may also be a means to enter high-risk ventures while avoiding potentially damaging effects on the initial firm if a new venture fails (Westhead and Wright, 1998). Habitual entrepreneurs were also found to place more emphasis on organizational routines oriented towards innovation (Westhead et al., 2003), creativity (Westhead et al, 2005a) and growth (Carter and Ram, 2003). Westhead et al. (2005b) concluded that portfolio entrepreneurs were more likely to express dimensions of entrepreneurial behavior. In line with these notions, we hypothesize:

Hypothesis 5: Habitual business founders are more entrepreneurially oriented than novice founders

Firm's financial conditions and entrepreneurial orientation

The role of financial slack as a source of entrepreneurial orientation is not clear. Financial slack is considered to be liquid assets, such as cash, and risk-free borrowing capacity beyond that needed to meet current operating and debt servicing requirements (McMahon, 2006).

On the one hand, as Penrose's (1959) growth theory assumes, slack creates opportunities for a firm's management to act entrepreneurially and seize the perceived growth opportunities. Slack resources are also seen as the fuel for organizational innovation. In this light it would

appear that financial slack could facilitate the pursuit of EO. On the other hand, Bradley et al. (2011) argue that financial slack has a negative effect on the willingness of management to behave entrepreneurially. Bradley et al. (2011) point out that “resource slack entices managers to be administrative rather than entrepreneurial in their management approach.” They also mention that substantial access to resources causes risk aversion among managers because they wish to protect their current positions. Additionally, George (2005) argues that large financial resource reserves may reduce manager’s willingness to exploit new entrepreneurial opportunities. Hence, according to this line of thought significant financial resources have negative effect on EO. Furthermore, according to Bradley et al. (2011) the latest research has recognized that resource constraints can trigger entrepreneurial thinking and/or behaviors.

In line with Bradley et al. (2011) we hypothesize the following:

Hypothesis 6: Financial slack has a negative effect on entrepreneurial orientation.

Covin and Slevin (1989) note that in the small firm management literature, the importance of conservative financial management is widely acknowledged. Furthermore, Miller (2011) asks the following questions in his work: “Do conservative financial structures limit EO? What types of financial structures support EO?” Conservative financial policy can be defined as a policy of low leverage implying that managers prefer to keep debt ratios low (Marchina and Mura, 2010). Moreover, Marchina and Mura (2010) note that the reason for managers to keep debt ratios low is risk reduction. The tendency to avoid risks may lead to situations in which managers are reluctant to act as innovatively and proactively as would be possible. Furthermore, as heavy borrowing is one characteristic of strategic risk taking among the core components of EO, we therefore hypothesize the following:

Hypothesis 7: Financial conservatism limits entrepreneurial orientation.

3. Research Method

Sample and Data Collection

The empirical data used to test the hypotheses were drawn from a mail survey conducted in spring 2009 by means of a structured questionnaire. The initial population consisted of Finnish small private limited companies (they typically have few shareholders and are usually owner-managed family businesses) with a sales turnover between one and 10 million euros. Hypotheses were tested in a multiple industry setting in the interests of greater generalizability. A total of 13,495 firms were identified from the Voitto+ database, and a systematic random sample of 1,026 firms was drawn. The pre-tested survey questionnaire with an introductory cover letter was mailed to the respondents, who were assured of confidentiality and promised a summary of the results. A reminder was sent to those who had not responded within two weeks. Final responses were received from 194 companies, yielding a satisfactory effective response rate of 18.9 percent (194/1,026). It was possible to obtain financial information on the companies via the Voitto+ database, which is a commercial database containing the financial statements of over 82,000 Finnish firms. The financial measures used in this study are based on the financial statements for 2009. Non-response bias was checked on a number of key variables by comparing the early (first-round) respondents with the late respondents (following the suggestions of Armstrong and Overton, 1977) and no significant differences were found between these two groups.

Measures

We used nine items to capture the three dimensions of EO conceptualized by Miller (1983). The items are based on the work of Covin and Slevin (1990). However, they were slightly adapted to better fit the context of Finnish small enterprises. A principal component analysis of the EO items (see Table 1) resulted in two components explaining together 61% of the variance in the items. The items measuring innovativeness and proactiveness merged into the first component, while risk-taking items loaded highly on the second component. The internal consistency of the scales was at a good level, as the Cronbach's alpha values were .865 for innovativeness/proactiveness and .671 for risk-taking respectively.

Table 1 Principal component loadings of the EO items

Item	Innovativeness & Proactiveness	Risk taking	Communality
We invest heavily in developing new products, services and business practices.	.81	.17	.68
Continuous renewal and innovation are important for our company	.81	.24	.71
In our company, new ideas come up all the time	.79	.12	.64
We aim at being at the forefront of development in our business sector.	.76	.22	.63
Lately we have launched many new products/ services.	.73	.14	.55
Our company often acts before the competitors do.	.63	.19	.43
In uncertain situations we are not afraid to take substantial risks.	<.20	.82	.68
Bold action is necessary to achieve our company's objectives.	.32	.74	.64
We prefer the cautious line of action even if some opportunity might be lost that way. (Reversed)	-.19	-.69	.52
Eigenvalue	4.22	1.25	
Cum % of variance	46.90	60.80	

Principal Component Analysis with Varimax rotation. KMO measure of sampling adequacy = .846, Bartlett Chi Square = 686 with 36 d.f., $p = .000$, MSA for individual items ranged from .73 to .93

In our study the work values were measured on a scale adapted from three very similar scales used by Lyons, Duxbury and Higgins (2006), Lafuente and Salas (1989), and Elizur (1984). They found that the 22 items weighted the following five factors: intrinsic work values, extrinsic work values, status (prestige) work values, altruistic work values and social work values. Some of the original items were omitted because they were not suitable for small Finnish firms. The final measure included 19 items (see Appendix), all assessed on a five-point Likert scale with the anchors 1 = not at all important, 5 = of utmost importance. In our data we found four factors grouped according to the factor structure described by Lyons et al. (2006): intrinsic work values (five items), extrinsic work values (three items), status work values (three items) and social work values (four items). The internal consistencies of the

scales were satisfactory, as Cronbach's alpha values were .755 for intrinsic values, .792 for extrinsic values, .685 for status values and .577 for social values.

The entrepreneurs' business founding experience was measured as a habitual dummy variable coded as 1 if the respondent reported current or previous ownership of other firms in addition to the focal firm in the survey. This dummy variable received a value of 0 if the respondent had not owned other companies, thus representing a novice entrepreneur.

McMahon (2006) note that financial slack is related to high liquidity, and used quick ratio based division among firms to define them in groups of firms with financial slack and firms without financial slack. Similarly, to measure the financial slack we used a dummy variable based on the five year (2005-2009) average of the quick ratio. We defined the firm to have financial slack if the average quick ratio exceeded value of one, in that case the dummy got a value of one and otherwise zero. With the quick ratio a value equal or greater than one is, as a rule of thumb, held as an indicator for good liquidity.

Similarly to Marchica and Mura (2010) and O'Brien (2003), we relate conservative financial policy with a level of low leverage. To measure financial conservatism we used the equity ratio, which is computed by dividing the book value of equity by the book value of total assets, the higher the equity ratio the more financially conservative the firm.

To empirically test our hypothesis the following equation was used in our regression analysis:

$$(1) \quad EO = \alpha + \beta_1 \text{Extrinsic} + \beta_2 \text{Intrinsic} + \beta_3 \text{Status} + \beta_4 \text{Social} + \beta_5 \text{HabitualDummy} + \beta_6 \text{EquityRatio} + \beta_7 \text{SlackDummy} + \varepsilon$$

4. Results

The descriptive results based on 193 respondents are shown in Table 2. The results show that there is no significant difference in the level of EO among the two different types of entrepreneurs. For Finnish entrepreneurs the work values *extrinsic* and *intrinsic* seem to be more important than work values *status* or *social*. With financial slack it seems that 71 % of all the firms are found to possess financial slack, especially the firms of novice entrepreneurs. An interesting finding is that the novice entrepreneurs tend to be more financially conservative than the habitual entrepreneurs. The difference in the equity ratio is both statistically and practically significant, revealing that the firms of habitual entrepreneurs have higher portions of debt than those of novice entrepreneurs. The number of employees is higher in the firms of novice entrepreneurs and the difference is nearly statistically significance at the 10% risk level. The same pattern is seen when the size of the company is measured by total sales in 2009, but the difference is not statistically significant.

Table 2 Descriptive statistics

Variable	Type of Entrepreneur		
	All	Habitual	Novice
	Mean	Mean	Mean
	St. Dev.	St. Dev.	St. Dev.
EO	3.31	3.36	3.27
	0.69	0.70	0.67
Extrinsic value	4.01	3.94	4.08
	0.76	0.82	0.69
Intrinsic value	4.24	4.18	4.30
	0.52	0.57	0.47
Status value	3.33	3.18	3.50*
	0.82	0.83	0.79
Social value	3.11	3.18	3.04
	0.83	0.86	0.80
Slack dummy	0.71	0.68	0.75
	0.45	0.46	0.43
Equity ratio (%)	56.67	51.49	62.68*
	25.40	28.22	20.66
Number of Employees 2009	17.97	14.59	19.63
	20.90	14.37	24.02
Sales 2009 (thousand euros)	2212.58	2230.10	2399.60
	1757.51	1695.30	2153.10

*Statistically significant difference at 5% risk level, independent samples t-test

The correlations in Table 3 show that generally EO is positively related to intrinsic and status values. It is also noteworthy that there is a significant negative relationship between EO and financial conservatism (equity ratio) implying that financially more conservative firms tend to be less entrepreneurially oriented. The work values also seem to be related to each other.

Table 3 Correlation matrix

Variable	1	2	3	4	5	6	7	8
1 EO	1							
2 Extrinsic value	0.07	1						
3 Intrinsic value	0.40***	0.14**	1					
4 # of employees 09	0.02	-0.01	-0.17*	1				
5 Equity ratio	-0.19**	-0.02	-0.08	-0.04	1			
6 Sales 09	0.10	-0.03	-0.13*	0.62***	-0.11	1		
7 Social value	0.14*	0.21***	0.13*	-0.05	-0.06	-0.12*	1	
8 Status value	0.25***	0.33***	0.23***	0.17*	0.05	0.05	0.21***	1

*** p< 0.01, ** p< 0.05, *p<.10

The empirical data were analyzed using linear regression analysis. The analysis of the residuals did not reveal any violation of the basic assumptions for ordinary least squares estimation. The tolerance values varied between .64 and .97, implying that multicollinearity was not a problem, either.

Table 4 shows the effects of work values, equity ratio, financial slack, and entrepreneur's background on the EO dimensions. The R-squared values and F-values indicated that the constructs selected for this analysis explain a significant proportion of the variance in the dependent variables. The results show that intrinsic and status values are both positively and significantly related to the level of entrepreneurial orientation. This concurs with earlier findings, as Westhead and Wright (1998) pointed out that individuals seeking status are pursue entrepreneurial careers and Fagenson (1993) showed that business founders typically have higher levels of intrinsic values. As the extrinsic value has a negative and significant effect on EO, this type of relationship seems logical, since individuals with high levels of extrinsic values appreciate job security and comfort. Hence our hypotheses number 1, 2, 3 are also empirically supported. Hypothesis number 4 is not empirically supported.

The habitual dummy has a positive and significant effect on EO, supporting our hypothesis 5. This finding implies that experienced entrepreneurs are willing to take risks, being innovative and proactive in their businesses. Financial slack and financial conservatism have no significant effects on EO, signalling that neither financial resources nor financial constraints strengthen the pursuit of higher levels of entrepreneurial orientation. Hence, our hypotheses 6 and 7 are not empirically supported.

Table 4 Regression results

Dependent variable: Entrepreneurial Orientation				
Independent variables	Parameter estimate <i>b</i>	Standard error of <i>b</i>	<i>t</i>-value	<i>p</i>-value
Constant	1.203***	0.605	1.99	0.049
Extrinsic value	-0.182***	0.079	-2.28	0.025
Intrinsic value	0.536***	0.107	5.01	<.001
Status value	0.123*	0.074	1.67	0.097
Social value	0.065	0.066	0.98	0.328
Habitual Dummy	0.249**	0.119	2.08	0.040
Equity ratio	-0.002	0.003	-0.72	0.470
Slack Dummy	-0.096	0.161	-0.60	0.553
<i>Model fit</i>	$R^2=0.31$	$F=5.85$		$p<.001$

*** $p < 0.01$, ** $p < 0.05$, * $p < .10$

5. Conclusion

The results of our study contribute to the literature on entrepreneurial orientation in the SME context by showing that EO can to a large extent be explained by the work values and business founding experience of the owner-manager. The analyses revealed that owner-managers' work values related to building up status and demand for challenges in his/her work endorse entrepreneurs' willingness to take risks, be proactive and innovative in their businesses.

An entrepreneur's experience is also significantly related to EO; novice entrepreneurs seem to behave more cautiously than their more experienced counterparts. This observation together

with the finding that the firm's financial resources do not affect the level of EO indicates that especially in the small firm context the most important antecedent of EO is the entrepreneur him/herself, not the characteristics or resources of the firm. The owner-managers' personal aspirations, values and experience determine how entrepreneurially oriented they will be.

For future EO research within the small firm context these findings imply that there are good reasons and needs to focus on the entrepreneur's personality. In this sense, there is a remarkable difference whether we are looking for the antecedents of EO in small firms or in large corporations.

The study also provides some implications for policymakers and practitioners. Entrepreneurship and small businesses play a crucial role in many national economies. Any effective public policy to promote new firm creation or the entrepreneurial innovativeness of existing small businesses will have to take note of the heterogeneity of entrepreneurs and identify the potential of existing entrepreneurs who are likely to be affected by such policies (Lafuente and Salas, 1989). When the policies for new firm creation are formulated, it is actually only the personal characteristics, values and experience which can be observed and used for targeting the policies. Recognition of the work values and aspirations for innovativeness and proactiveness could also be useful for the small business owners themselves and for their key stakeholders, for example when facing decisions about external financing or ownership arrangements.

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Appendix 1:

Work values: How important do you consider the following work characteristics? 1=not very important, 5= of utmost importance

Intrinsic work values:

The work is inspiring

The work offers challenges where I can apply my skills

I can learn or create something new

I can enjoy my work

I can affect the organization's success

Extrinsic work values:

I can get a secure income from the business

I can get a sufficient monetary reward for my work

I can obtain wealth through the business

Status work values:

The work is respected by others

I can manage and organize other people's work

I can advance in my career

Social work values:

I can offer employment to others

I can work in a business owned by my family

The work has an impact on the society

I can leave a solid business to the next owner generation

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