Linköping Studies in Science and
Technology, Thesis No. 1623
LiU-TEK-LIC 2013:57

**Firm-level entrepreneurship and the
internationalization of small and medium-sized
enterprises**

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2013

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Linköping studies in science and technology,
Thesis No. 1623

LiU-TEK-Lic 2013:57

ISBN: 978-91-7519-497-4
ISSN: 0280-7971

Printed by: LiU-Tryck, Linköping

Distributed by:

Linköping University
Department of Management and Engineering
SE-581 83 Linköping, Sweden
Tel: +46 13 281000, fax: +46 13 281873

Abstract

During the last decade, firm-level entrepreneurship (FLE) as a strategic resource that may influence corporate performance has attracted the attention of numerous researchers. Many measurements have been developed to gauge the entrepreneurial intensity at the firm level, such as entrepreneurial orientation (EO), corporate entrepreneurship (CE), and entrepreneurial management (EM). EO and CE were the most popular, and researchers employed them to investigate the phenomenon of firm-level entrepreneurship.

Gradually, a contradiction emerged in the literature regarding the proper measurement of FLE. Various studies recommended integrating EO and CE in a more comprehensive measurement to develop a deeper understanding of FLE. In fact, EO and CE complemented each other well; while the former focused on the proclivity of firms toward entrepreneurial behaviors and activities, the latter was an output-based construct which pointed out the actual entrepreneurial actions such as innovation, venturing and strategic renewal.

This study develops an integrated model of EO and CE to classify companies into the four categories of non-entrepreneurial, forced entrepreneurial, latent entrepreneurial, and actual entrepreneurial firms. The primary objective of the study is to investigate if entrepreneurial firms show a higher degree of internationalization.

The research was performed in two distinctive but related steps to both examine the integrated model in the real context and test the research hypotheses. In the first step, the multi-case study approach was applied to investigate if the model categorizes companies that are actually different. To conduct this step, four companies were selected, each of which was a representative of a unique category of the model. Then, in-depth interviews were implemented to assess their behaviors on some special factors, which had been identified as the differential characteristics of entrepreneurial versus non-entrepreneurial firms. To test the research hypotheses, widely-accepted questionnaires, which were validated by current studies, were employed.

List of abbreviations

SMEs	Small and Medium-sized Enterprises
SUE	Start-Up Entrepreneurship
FLE	Firm-Level Entrepreneurship
EO	Entrepreneurial Orientation
CE	Corporate Entrepreneurship
EM	Entrepreneurial Management
NE	Non-Entrepreneurial
FE	Forced Entrepreneurial
LE	Latent Entrepreneurial
AE	Actual Entrepreneurial
ED	Environment Dynamism
EH	Environment Hostility
FDI	Foreign Direct Investment
U-model	Uppsala model
I-model	Innovation-related model
HR	Hierarchical Regression
DHR	Dummy Hierarchical Regression
MMHR	Multiple Moderated Hierarchical Regression
DMMHR	Dummy Multiple Moderated Hierarchical Regression
ANCOVA	Analysis of Covariance

Acknowledgement

There are many people in our lives who hold the light to see the path and assist us to overcome obstacles and expel obstructions. Those people polish our feelings, extend our understanding, and shed a brilliant light in the darkest side of our soul. Those are angels who deserve to be respectfully recognized and appreciated.

I want to say thanks to my parents, who taught me to set realistic goals and advised me to be hoping against hope whenever I was disappointed. I want to say thanks to my wife who stood behind me as a hero, and bore all difficulties to protect our family. I want to say thanks to my friends who listened to all my discussions and helped me to trim my ideas.

I want to give special thanks to my supervisors, Professor Hossein Dadfar and Professor Staffan Brege, who advised me during all steps of the study. I gratefully appreciate their attempts. I have greatly benefited from their deep understanding of the field of internationalization and entrepreneurship. By sharing their precious experiences through discussions that we had during the performing of the research, they provided me with useful knowledge, which will tremendously help me in my future work.

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1.Introduction

This chapter explains the scope, importance, and purpose of the study, brings up conceptualizations and definitions, and clarifies the essential problem which shapes the foundation of the research. The main goal of the study is to investigate the influence of Firm Level Entrepreneurship (FLE) on the internationalization of SMEs. The crucial uniqueness of the research, as well as the scant number of empirical studies that focus on the relation of FLE and internationalization, has lain on employing an integrated model of FLE. The research has also been carried out in Iran as a geographical area that has been recommended for further investigation.

The important role of SMEs in every economy has been confirmed by several surveys, reports, censuses and studies. About 90% of all businesses around the world are classified as SMEs, which are responsible for more than 50% of employment (UNIDO, 2005). In the European Union, SMEs make up the backbone of the economy (Wymenga et al. 2011). In 2010, about 99.8% of over 20.8 million non-financial businesses in the EU were SMEs, and around 92% of those, referred to as micro firms, had fewer than 10 employees (de Kok et al. 2011). Surprisingly, the contributions of SMEs in the economy of Iran is nearly identical to that in the EU, with about 99.8% (UNIDO 2003) or 99.9% (Zohari 2008) of Iranian companies classified as SMEs, depending on the source. The share of micro firms in the economy of Iran is about 98.4% (UNIDO 2003).

In addition, SMEs contribute to employment and job creation. About 67% of EU employment is provided by SMEs, and they also have a positive influence on economic growth (de Kok et al. 2011). In the same vein, SMEs are responsible for 54.6% of the employment in Iran (UNIDO 2003). Between 2002 and 2010, SMEs generated about 85% of the employment growth in the EU, which means about 935,000 jobs per year (de Kok et al. 2011). This pivotal role of SMEs continued in the next year, and their contribution in job creation was more promising in 2011 (Wymenga et al. 2011). Considering the number of people employed by SMEs and the employment growth rate, their essential role on economic health and societal welfare is undeniable.

During the last century, all types of economic activities moved in the direction of globalization, and in the current century, a worldwide system of production and distribution is evolving (Acs & Preston 1997). Today, the speed of the globalization movement that started at the end of the 20th century is increasing, which causes several influential reformations in the business and trade structures. Gilpin and Gilpin (2002), at the beginning of the century, wrote, “*A number of books proclaim that, whether we like it or not, global capitalism and economic globalization are here to stay. Unfettered markets, they argue, now drive the world and all must adjust, however painful this may be*” (P.13).

These new structures of business and trade are being reinforced by a number of technological advancements, particularly in biotechnology, information processing, and telecommunications (Acs & Preston 1997). Therefore, in the current century companies are surrounded by international competitors who threaten their survival. In fact, within the global village that all businesses are connected, and given international competition that resolves the traditional borders of local markets, internationalization is unavoidable.

Besides the external pressure of the globalization movement, SMEs in developing countries are internally pushed toward internationalization because the direct subsidiaries and governmental protections are reduced (Etemad 1999) or changed. Despite the external and internal forces of globalization and the risk of not engaging, many Iranian SMEs have been focusing on their national market, and their contributions in international activities are very limited. Barriers to entry and property right protections may be the most important reasons for the limited international activities of SMEs (Acedo & Jones 2007a). A number of the major barriers to internationalization for SMEs are shown in Table 1-1.

Being entrepreneurially visionary may encourage SMEs to overcome these barriers and facilitate the process of internationalization, especially in the initial steps (Achtenhagen 2011). Therefore, it seems that the entrepreneurial visions and activities can help SMEs to overcome the barriers of internationalization and expand their markets beyond national boundaries.

Table 1-1. Top ten barriers to internationalization for SMEs

Rank	OECD Classification	Description of barrier
1	Capabilities	Inadequate quantity of and/or untrained personnel for internationalization
2	Finance	Shortage of working capital to finance exports
3	Access	Limited information to locate/analyze markets
4	Finance	Identifying foreign business opportunities
5	Capabilities	Lack of managerial time to deal with internationalization
6	Capabilities	Inability to contact potential overseas customers
7	Capabilities	Developing new products for foreign markets
8	Business Environment	Unfamiliar foreign business practices
9	Capabilities	Meeting export product quality/standards/specifications
10	Finance	Unfamiliar exporting procedures/paperwork

Source: (Party 2008)

Because of the importance of entrepreneurship in the development and internationalization of SMEs, planners and policy makers in Iran pay considerable attention to the role of entrepreneurs in developing communities (Analoui et al. 2009). In fact, they estimate that the support of SMEs is equivalent to the support of entrepreneurship (Talebi, Tajeddin, et al. 2012b). Therefore, the major Iranian strategic business supportive plans such as Globalization Policy (2006) and Trade and Industrial Policies (2005-2009) have adopted entrepreneurship policies; examples include enhancing women's entrepreneurship and encouraging all kinds of employment-generating activities (Zohari 2008). The Ministry of Cooperatives, Labor and Social Welfare, in cooperation with other associations including the Labor and Social Security Institute, Iran Small Industries and Industrial Parks, Iran Technical and Vocational Training Organization and The University of Tehran, Faculty of Entrepreneurship, conducted practical and educational programs to implement the entrepreneurship policies. The Ministry of Health and Medical Education and the Ministry of Petroleum have established their professional entrepreneurship centers to support healthcare and petroleum entrepreneurs and ventures. Consequently, the government allocates an immense annual budget for supporting entrepreneurship to improve the performance and facilitate the internationalization of SMEs.

In summary, it appears that SMEs, as the main part of the European and Iranian economies, have been faced with some barriers to internationalization. To

overcome these barriers and speed up the internationalization of SMEs, the Iranian government disburses a considerable annual budget to support entrepreneurship. In fact, most supportive plans and policies for the internationalization of SMEs presupposed that entrepreneurship and entrepreneurial activities influence and facilitate internationalization. However, with attention to the scant number of internationalization studies of SMEs in developing countries and the ambiguities that exist around the relation of entrepreneurship and internationalization, it seems that there is a need for a deeper investigation of the effect of FLE on the internationalization of Iranian SMEs.

1.1. Entrepreneurship

Many entrepreneurship researchers have selected entrepreneurs as the unit of analysis in their studies (Grilo & Irigoyen 2006; Carland et al. 1984; Hinz & Jungbauer-Gans 1999; Orhan & Scott 2001), but there are others who have chosen a different perspective and have focused on entrepreneurial activities at the firm level instead (e.g. (Miller & Friesen 1982; Covin & Slevin 1989; Lumpkin & Dess 1996; Zahra 1993a). In this study, these different streams of entrepreneurship studies are respectively called “Start-Up Entrepreneurship” and “Firm-Level Entrepreneurship”. While the main concerns of the former have been on studying the characteristics, activities and strategies of people who want to be an entrepreneur and the processes of starting up a new business, the latter deals with poring over entrepreneurship in existing companies and trying to probe the effects of FLE on the firms’ strategic dimensions like corporate performance and internationalization.

There are several definitions of entrepreneurship in the literature. The main themes in these definitions are: the role of the entrepreneur as the main actor to perform entrepreneurial activities at an organization-wide level (Brockhaus and Horowitz, 1986); the creation of a new venture as the major output of entrepreneurship (Gartner 1988); and the exploration and exploitation of entrepreneurial opportunities as the heart of the entrepreneurship process (Shane & Venkataraman 2000; Stevenson & Jarillo 1990). The best theme for defining FLE is to describe it

based on the exploration and exploitation of opportunities, since this theme does not restrict entrepreneurial acts solely to the individual level (Kreiser 2005). According to the widely-cited definition of entrepreneurship as the process of exploration and exploitation of opportunities (Shane & Venkataraman 2000), FLE is defined as “How, and with what effects organizations discover, evaluate, and exploit opportunities to create future goods and services” (Kreiser 2005).

Researchers have applied different terms and phrases to describe FLE activities; some examples are strategic posture (Covin & Slevin 1989), corporate entrepreneurship (Barringer & Bluedorn 1999), entrepreneurial orientation (Lumpkin & Dess 1996; Naman & Slevin 1993), entrepreneurial management (Stevenson & Jarillo 1990) and intrapreneurship (Pinchot 1986). While these terms are used interchangeably in some articles, each term just focuses on one dimension of FLE, and none of them discloses the entire picture of FLE.

Different conceptualizations and operationalizations of FLE, or different theoretical models that have been applied through empirical studies, may lead to inconsistent or sometimes contradictory findings (Lyon et al. 2000). While many researchers have employed entrepreneurial orientation (EO) to determine the degree of entrepreneurship at the firm level (Covin & Slevin 1989; Lumpkin & Dess 1996; Wiklund & Shepherd 2005), others claim that EO just represents the orientation of the firm and introduced CE, which focuses on the actual entrepreneurial outputs (Zahra 1991; Zahra 1993b; Simsek et al. 2007). However, corporate entrepreneurship (CE) is also a one-dimensional concept that only considers the entrepreneurial outputs as the measurement of FLE, and ignores the tendency of firms to take entrepreneurial strategies and actions. Consequently, neither EO nor CE can solely describe FLE.

Former studies which applied one of these constructs to measure FLE only investigated entrepreneurial orientation or entrepreneurial outputs, not firm-level entrepreneurship. Therefore, to gain a deeper understanding of FLE and its effect on the internationalization of SMEs, synthesizing EO and CE in a more comprehensive model or an integrative measurement is necessary.

1.2. Entrepreneurship and internationalization

In spite of the recognition of the importance of entrepreneurial activities for improving international performance and former recommendations to focus on this area of research (Guth & Ginsberg 1990), few empirical studies to date have concentrated on international FLE (Ortiz de Urbina Criado et al. 2011). In fact, the literature that examines the effect of innovation and entrepreneurship on the internationalization of SMEs is very limited (O'Cass & Weerawardena 2009).

Despite the scant number of empirical studies available, the theoretical context of internationalization and entrepreneurship is dynamic, and international entrepreneurship has emerged as a new field to study the shared areas of entrepreneurship and internationalization (McDougall 1989). International entrepreneurship is a combination of entrepreneurial activities including innovativeness, risk-taking and proactiveness in international markets, and intends to create value in organizations (McDougall & Oviatt 2000). It refers to discovery, enactment, evaluation and exploitation of opportunities across national borders to create future goods and services (Oviatt & McDougall 2005). According to the definitions of international entrepreneurship, the studies of FLE and internationalization are settled at the heart of international entrepreneurship.

Although some international entrepreneurship studies have tried to conceptualize the internationalization of SMEs as an entrepreneurial process (Knight 2000; Lu & Beamish 2001), the main interest in international entrepreneurship is still to investigate the relationship of FLE, corporate performance and some moderators that may influence this relationship (Covin et al. 2006).

Accordingly, despite the importance of the relationship between FLE and internationalization, there are a few empirical studies that have focused on it. Furthermore, existing studies suffer from a lack of consensus. However, some researchers stated that entrepreneurial characteristics such as innovative, proactive and risk-taking behaviors provide a particular mindset or cognition that may play a part in the degree and speed of internationalization (Acedo & Jones 2007b), but the direction of this relationship is still inconclusive (Dimitratos et al. 2004; Hart 1992;

Miller & Friesen 1982). While some studies have demonstrated a positive relationship between FLE and internationalization (O'Cass & Weerawardena 2009; Zahra et al. 2001), others could not find any conclusive effects (Kropp et al. 2006; Dimitratos et al. 2004). Given the importance of FLE internationalization studies for international entrepreneurship as a new field of research, the limited number of empirical studies, and the conflicting and contradictory results, it seems necessary to investigate the effect of FLE on the internationalization of SMEs.

Empirical studies which have focused on the relation of FLE and performance, also approved that this relation can be moderated by environmental factors (Lumpkin & Dess 1996; Zahra 1993b; Zahra & Covin 1995). Two most popular environmental moderators which frequently employed in FLE literature are environment dynamism and environment hostility (Khandwalla 1977; Miller & Friesen 1982). To provide a deeper and more precise understanding of the impact of FLE on the internationalization of SMEs, considering these moderators can be helpful.

In this study, a number of variables that may influence the internationalization of SMEs are controlled to deliver more accurate results. The most important control variables are firm size (Dunning 1988; Pan et al. 1999), former international experience of CEO (Bilkey & Tesar 1977; Johanson & Vahlne 1977), and psychic distance (Johanson & Vahlne 1977; Root 1994).

1.3. Research purpose

The purpose of this mixed methods, explanatory study is to increase understanding regarding the effect of FLE on the internationalization of Iranian food and beverage SMEs. To analyze the association of FLE and internationalization more precisely, the research develops an integrative measurement of FLE by incorporating EO and CE. All variables are measured through validated questionnaires, which were developed by leading researchers and successfully employed in the literature.

1.4. Research questions

As mentioned earlier, most planners and policy-makers in Iran assume that the supporting entrepreneurship is exactly equivalent to supporting SMEs. This assumption has intensely influenced the supportive plans which are designed to

help the internationalization of SMEs. However, the number of empirical studies that have focused on affirming this presupposition is very limited in developing countries such as Iran. Thus, the main question of the research is: *What is the effect of FLE on the internationalization of SMEs?*

To answer this question, relevant literature was reviewed. Reviewing the literature showed that there is no accepted definition and measurement of FLE. In fact, an ambiguity regarding the essence of FLE and its appropriate measurement was present in the former studies. Therefore, another important question has emerged: *What is FLE and how can we measure it?* Figure 1-1 illustrates the research questions and their relations.

Figure 1-1. Research questions and their relations

In this study, FLE is comprised of two different parts, Entrepreneurial Orientation (EO) and Corporate Entrepreneurship (CE). EO refers to the tendency of firms to engage in entrepreneurial activities, while CE represents their actual entrepreneurial outputs at the firm level. Moreover, the internationalization as a main variable is composed of two sub-variables, speed of internationalization and international performance. By breaking down the main question into the components of FLE and

internationalization, four sub-questions have been developed, as shown in the larger dotted box in Figure 1-1.

The smaller dotted box on the right side of Figure 1-1 contains contingency questions. These questions point out the effect of environmental factors on the relationship of FLE, internationalization and their components.

1.5. Research aims and objectives

In accordance with the main question of the research, the primary aim of the study is to investigate and understand the effect of FLE on the internationalization of SMEs. To perform this correctly, the research faced two essential challenges. The first was the precise definition and operationalization of FLE, and the second was the moderating effect of the environmental factors on the relation of FLE and internationalization. Consequently, the research aims and objectives are presented as follows:

Research aims

1. To study the effect of FLE on the internationalization of Iranian food and beverage SMEs by implementing a more comprehensive model of FLE.
2. To develop a more comprehensive measurement of FLE and investigate its potential to identify all types of entrepreneurial firms and separate them from non-entrepreneurial companies.

Research Objectives

1. To study the effect of EO on the internationalization of Iranian food and beverage SMEs by applying Covin & Slevin (1989) measurement.
2. To study the effect of CE on the internationalization of Iranian food and beverage SMEs by applying the measurement of Zahra (1991).
3. To study the effect of FLE on the speed of internationalization and international performance of Iranian food and beverage SMEs.

1.6. Research overview

This thesis contains seven chapters that encompass all dimensions of the research in a logical process. Figure 1-2 depicts a complete picture of the thesis.

Figure 1-2. Overview of the thesis

This chapter, as an introduction, presents a very short summary of the study. It explains the problems that the research has focused on, its purpose, aims and objectives, and provides a quick review of the definitions, conceptualizations and a brief summary of former empirical studies. The next chapter describes FLE, reviews the measurements and operationalization, summarizes the pros and cons of existing measurements, and finally develops a more comprehensive integrative model to classify firms based on their degree of FLE activities. The third chapter reviews the literature and incorporates existing theoretical and empirical findings to design the research model and hypotheses.

The chapter on methodology discusses the research approach, analytical techniques and the process of performing the research. The findings of the study are presented in two distinct chapters. Chapter 5 presents the analysis of the case studies and aims to answer questions regarding FLE measurement. The case studies are applied to investigate if the proposed four-fold model can realistically differentiate all kinds of entrepreneurial and non-entrepreneurial firms. This chapter reviews the characteristics of four cases that were selected based on the proposed four-fold model, and compares them to confirm if they are actually different.

Chapter 6 focuses on the survey analysis, and tests the research hypotheses by employing the relevant analytical techniques. Finally, Chapter seven provides practical conclusions by summarizing, categorizing, analyzing and inferring data and comparing findings with the theoretical background and former empirical studies.

Figure 1-3. The process of the research

Each chapter - solely or in combination with others - has a specific purpose or answers a particular research question. Figure 1-3 presents the process of the research and the positions of the chapters with regard to the questions they are intended to answer.

1.7. Research delimitations

Because of the limited time, cost and accessibility of researchers, every study comes with some limitations, and writing them down provides practical guidelines for future researchers who may want to use the research findings in their studies. The main limitations of this study are geographical, time, theoretical, unit of analysis, and data adequacy restrictions.

This study was performed with food and beverage SMEs in three main provinces of Iran, Boushehr, Fars and Khorasan. Therefore, when using the findings of the study, it is important to pay attention to the limited geographical area and the target industry. Data were gathered during the summer of 2012. Because of the dynamic nature of business studies, especially in the context of SMEs, the result should be carefully considered.

To measure FLE, we applied an integrative model of two widely accepted measurements consisting of Covin and Slevin's (1989) EO (includes the three dimensions of innovativeness, proactiveness and risk-taking) and Zahra's (1991) CE (includes the three dimensions of innovation, venturing, and strategic renewal). Clearly, there are some measurements such as Stevenson and Jarillo's (1990) entrepreneurial management and Lumpkin and Dess' (1996) EO that are excluded from the model to avoid complexity. Moreover, these measurements are less popular than those that are employed in the model.

This research has focused on the firm as the unit of analysis and gauged the whole degree of FLE, not the precise entrepreneurial activities of each individual or each management level of the company. Therefore, future researchers who want to investigate the impact of individual corporate entrepreneurs or entrepreneurial activities of a given management level on internationalization should be meticulous in considering the conclusion. The other important restriction of the study is related to the data inadequacy for conducting more sophisticated analytical techniques such as factor analysis. As a result, the proposed model of FLE is examined by recruiting a multi-case study approach.

2. Firm-Level Entrepreneurship, its measurements and the four-fold model

In this chapter, popular constructs that have been proposed to measure the degree of FLE are reviewed and summarized. The chapter starts by defining FLE, and continues by reviewing its widely accepted measurements. The remaining parts of the chapter discuss the shortages of existing measurements and former recommendations about how to apply them, and finally propose a four-fold model to classify companies based on their FLE situation. The suggested model categorizes companies into four different groups of firms: non-entrepreneurial, forced entrepreneurial, latent entrepreneurial, and actual entrepreneurial. This model will be recruited by the study to determine the state of FLE in a given company.

Entrepreneurship studies are divided into two different streams of research: traditional studies that focus on the start-up of new firms, and more recent papers which investigate entrepreneurship as a firm-level phenomenon (Brown et al. 2001). Distinguishing these two streams, at least in the case of entrepreneurial behavior, is very important (Stevenson & Jarillo 1990). Therefore, both forms of entrepreneurship are described in this study. The first stream is called “start-up entrepreneurship”, and the second, “firm-level entrepreneurship”.

To study entrepreneurial activities, test entrepreneurship theories and develop the entrepreneurship field further, adequate and clear conceptualization of key constructs and their measurements is unavoidable (Brown et al. 2001). In fact, ill-defined concepts may lead to inappropriate and ambiguous conclusions (B. A. George, 2011). For instance, Lyon (2000) stated that the challenges surrounding the relationship between entrepreneurship and corporate performance may originate from the problems with operationalization and measuring entrepreneurship. In fact, there are a few validated measurements of FLE in the contemporary literature of entrepreneurship (Brown et al. 2001), and to develop an accurate research process which correctly investigates entrepreneurship behavior and activities at the firm level, knowing, evaluating and sometimes integrating these constructs can be very helpful.

Actually, the main concern of this research is to forecast the internationalization of SMEs by their degree of FLE. Consequently, finding a comprehensive definition and a correct measurement of FLE is the essential foundation of the study.

Unfortunately, there is not a uniform definition of entrepreneurship or FLE. Researchers have presented different conceptualizations of entrepreneurship based on their views and purposes. This is also true regarding how to gauge entrepreneurship, especially at the firm level. There are several measurements for FLE in the literature, and Employing different measurements of FLE may lead to different results. In fact, with the ambiguity surrounding the nature of firm-level entrepreneurship and the little consensus about its proper construct, emerging a general understanding about the influence of firm-level entrepreneurship on competitive advantage (Covin & Miles 1999) and other organizational aspects has failed.

Therefore, this chapter presents a uniform definition of FLE based on the common themes of former conceptualizations, and develops a more comprehensive model by integrating the most accepted measurements.

2.1. FLE: a uniform definition

Despite the long history of entrepreneurship and continuous scientific endeavors to map its common components, there is a little consensus regarding its definition. Many researchers, however, have tried to reach a uniform definition of entrepreneurship. For example, Michael H Morris et al. (2008) performed a keyword analysis of entrepreneurship definitions and came up with 18 common keywords and themes. The most common themes were creation of wealth, creation of enterprise, creation of innovation, creation of change, creation of employment, creation of value, and creation of growth (Michael H Morris et al. 2008). Ultimately, they accepted the definition of Stevenson & Jarrillo-Mossi (1986) as a fairly comprehensive definition that incorporates the core components of entrepreneurship. Stevenson & Jarrillo-Mossi (1986) defined entrepreneurship as:

“ ... A process of creating value by bringing together a unique package of resources to exploit an opportunity” (p. 10).

Later, Shane & Venkataraman (2000) presented a more comprehensive version of Stevenson & Jarrillo-Mossi (1986) definition and described entrepreneurship as the process of discovering, evaluating and exploiting entrepreneurial opportunities.

Entrepreneurship is a broad concept that has been studied from different viewpoints. While some researchers have studied start-up entrepreneurs and their attributes in starting a new business (Gimeno et al. 1997; Holland & Shepherd 2011; S. Mueller et al. 2012), others have chosen different perspectives, focusing on the entrepreneurial activities in existing firms (Miller 1983; Covin & Slevin 1991; Lumpkin & Dess 1996; Zahra 1993a). Conceptualizing entrepreneurship, as the process of discovering, evaluating and exploiting entrepreneurial opportunities, is more fitting with its extended nature, and expands the field of entrepreneurship beyond start-up entrepreneurs, covering all types of entrepreneurial activities. By incorporating definitions of entrepreneurship by Stevenson & Jarrillo-Mossi (1986) and Shane & Venkataraman (2000), FLE can be conceptualized as *the process of discovering, evaluating, and exploiting entrepreneurial opportunities in a given firm that may lead to creation of value*.

2.2. FLE: Review of its measurements

Similar to the definition of entrepreneurship, there is no consensus on the contents and activities required of companies to be called entrepreneurial (Covin & Miles 1999). This situation leads to the proliferation of labels for entrepreneurship in existing firms. For example: firm-level entrepreneurship (Zahra 1993a), corporate entrepreneurship (Zahra 1991; Zahra 1993b; Burgelman 1983), strategic posture (Miller 1983; Covin & Slevin 1991), entrepreneurial orientation (Lumpkin & Dess 1996; Wiklund 1999), entrepreneurial management (Stevenson & Jarillo 1990; Brown et al. 2001), and intrapreneurship (Antoncic & Hisrich 2003; Antoncic & Hisrich 2001; Antoncic 2007). Although there are similarities among some of these labels (e.g. entrepreneurial orientation and strategic posture or corporate entrepreneurship, and firm-level entrepreneurship and intrapreneurship) they can be classified into three different groups of measurements that have focused on different dimensions of entrepreneurial activities at the firm level.

Entrepreneurial Orientation (EO)

Studying the proclivity of corporations toward entrepreneurial activities has been done under different labels including entrepreneurial orientation, style, intensity,

propensity, proclivity and strategic posture. Despite ambiguity in the concept that leads to different names and labels, EO has been a central concept in the research of entrepreneurship and strategy for three decades (Slevin & Terjesen 2011).

Miller (1983) was among the first who developed an accepted construct to measure the tendency of firms toward entrepreneurship. His work had its roots in a study by Khandwalla (1977), who differentiated entrepreneurial and non-entrepreneurial firms based on his scale of management style, which was constructed with the five dimensions of risk-taking, optimization, flexibility, participation, and coercion. In 1989, Covin and Slevin published their seminal paper about strategic management of small businesses. In their article, they developed the first widely accepted operationalization of EO based on the study by Miller (1983). This nine-item measurement, labeled as “strategic posture”, has been broadly accepted and applied as a valid and reliable measurement of EO (Lumpkin & Dess 1996; Wiklund 1999; Knight 1997b; Kreiser et al. 2002).

EO is a set of policies, tactics and strategies that help companies to cope with turbulent and changing environments (Miller 1983; Miller & Friesen 1982). Covin and Slevin (1989) refined this definition of EO, stating that “*The entrepreneurial-conservation orientation of a firm is demonstrated by the extent to which the top managers are inclined to take business-related risks, to favor change and innovation in order to obtain a competitive advantage for their firm, and to compete aggressively with other firms*” (P 77). Later, they reworded their definition in a simpler and more practical way, and redefined EO as three kinds of firm-level behaviors, namely: “*top management risk-taking with regard to investment decisions and strategic actions in the face of uncertainty; the extensiveness and frequency of product innovation and the related tendency toward technological leadership; and the pioneering nature of the firm as evident in the firm's propensity to aggressively and proactively compete with industry rivals*” (1991, P 10). Lumpkin and Dess (1996) presented a narrower definition of EO, limiting it explicitly to “*the processes, practices, and decision-making activities that lead to new entry*” (P 136). Therefore, EO refers to the proclivity of top managers to peruse proactive strategies, have innovative ideas and take risks that

form a basis for the processes, practices and decision-making activities that may lead to new entries.

There are a number of operationalization of EO in the literature. While Covin and Slevin (1989; 1991) proposed the three EO dimensions of innovativeness, proactiveness and risk-taking, other researchers suggested either more or fewer dimensions. For example, Lumpkin and Dess (1996; 2005) added autonomy and competitive aggressiveness and presented a five-dimensional construct, while Knight (1997b) eliminated risk-taking and Avlonitis & Salavou (2007) removed innovativeness and applied a two-dimensional operationalization. Despite little consensus about the dimensions of EO, most researchers have applied Covin and Slevin's (1989) operationalization (Wiklund 1999; M. Hughes & Morgan 2007; Rauch et al. 2009).

Innovativeness refers to the tendency of firms to engage in creativity and experimentation (Rauch et al. 2009), embrace technological leadership and R&D (M. Hughes & Morgan 2007), support new ideas (Walter et al. 2006) and find novel solutions (Dess & Lumpkin 2005) in new processes (Rauch et al. 2009), in the development of products and services (M. Hughes & Morgan 2007; Walter et al. 2006) or in improving technologies (Dess & Lumpkin 2005). The EO conceptualization of innovativeness fits with the definition of innovativeness by Garcia and Calantone (2002) as *“the propensity for a firm to innovate or develop new ideas (or) the propensity for a firm to adopt innovation”* (P. 113). Hence, innovativeness originates from an inclination to creativity and experimentation and departs from innovation (Hansen et al. 2011).

Proactiveness points to a firm's posture of anticipating and acting on future wants and needs (Lumpkin & Dess 1996), seizing favorable opportunities (Dess & Lumpkin 2005), and acting aggressively against rivals (Hansen et al. 2011). Proactive companies observe business trends, anticipate market demands and favorable venture opportunities (Dess & Lumpkin 2005), and are characterized by the introduction of new products and services ahead of the competition (Rauch et al. 2009).

Risk-taking refers to a willingness to appropriate money and resources to projects, activities and solutions that contain a high level of uncertainty (Lumpkin & Dess 1996), that usually have sharp profits and losses (Hansen et al. 2011), and are associated with a immense cost of failure (Miller & Friesen 1982). It involves taking bold actions by venturing into the unknown, borrowing heavily (Rauch et al. 2009), and seizing a venture opportunity when the success or failure is unpredictable (Dess & Lumpkin 2005).

In sum, EO refers to a behavioral orientation or posture that applies to any kind of firm (Morris et al. 2011), and indicates the degree to which a firm's disposition may be characterized as entrepreneurial versus conservative.

Corporate Entrepreneurship (CE)

CE is another important construct that has been developed in recent years to capture the degree of entrepreneurial activities of firms. Despite some studies that implicitly considered corporate entrepreneurship before 1990, it mainly emerged in academic journals after the seminal paper of Guth and Ginsberg (1990). Zahra (1991;1993b) provided a robust discussion and framework for the theorization and conceptualization of CE based on recommendations by Guth and Ginsberg (1990). Recently, researchers have improved the conceptualization and operationalization of CE and evaluated its reliability and validity in different contexts (Simsek et al. 2007).

CE refers to creating new businesses within established firms or the strategic renewal of existing businesses (Zahra 1991) by emphasizing innovation or changing the competitive profile (Zahra 1995; Zahra 1996). Zahra (1993a) defined CE as “ ... *a process of organizational renewal that has two distinct but related dimensions: innovation and venturing, and strategic renewal*”(P. 321). Sharma and Chrisman (1999) explained CE as “ ... *the process whereby an individual or a group of individuals, in association with an existing organization, create a new organization or instigate renewal or innovation within that organization*”(P. 18). They distinguished three different dimensions for CE: venturing, innovation and strategic renewal.

Venturing points to the creation of new ventures within existing business without regard to the size or the level of autonomy (Antoncic 2007). Some researchers incorporate venturing and innovation as one dimension (Guth & Ginsberg 1990; Zahra 1991; Zahra 1993b). In fact, innovation and venturing refer to establishing new ventures within existing firms by conducting new product, process, technology, or service innovations (Zahra 1993b). Actually, venturing and innovation are two of the different ways to achieve strategic renewal (Guth & Ginsberg 1990).

Strategic renewal has different contents such as reorganization, redefining the business concept, and introducing influential and system-wide changes for innovation (Zahra 1993b). Some researchers called this facet of CE “strategic entrepreneurship” (Michael H Morris et al. 2008; Kuratko & Audretsch 2009). Ireland (2003) stated that “*Strategic entrepreneurship (SE) involves simultaneous opportunity-seeking and advantage-seeking behaviors and results in superior firm performance*”(P. 963). Strategic renewal involves renewal, sustained regeneration, domain redefinition, organizational rejuvenation, and business model reconstruction (Covin & Miles 1999).

CE has focused on the actual entrepreneurial actions and is more tangible than EO and is defined as the sum of the actual entrepreneurial activities (outputs) of a firm in the forms of innovation, venturing and strategic renewal.

Entrepreneurial Management (EM)

Stevenson and Jarillo (1990) defined opportunity as the core of corporate entrepreneurship, and entrepreneurial management as the process of pursuing opportunities without regard to the resources currently controlled (Stevenson 1983). They believed that entrepreneurial behavior has the three different key components of detection of the opportunity, willingness to pursue it, and possibilities of succeeding (Stevenson & Jarillo 1990). This conceptualization of entrepreneurship consists of two key concepts: opportunities and pay no attention to the existing resources (Lilla 2012). This value-creating process can take place in any type of organization (Stevenson 1983; Stevenson & Gumpert 1985; Stevenson

& Jarrillo-Mossi 1986; Stevenson & Jarillo 1990), and “ ... *may be seen as a 'mode of management' different from traditional management, with different requirements of control and rewards systems, for instance* (Stevenson & Jarillo 1990)”(P.25).

Stevenson (1983) describes this type of management on a spectrum, with promoter firms at the entrepreneurship extreme and trustees at the administrative extreme. While the promoter firms' intent is to exploit the entrepreneurial opportunities without regard to resources currently controlled, the trustees try to use of their existing resources in the best and most efficient way possible (Stevenson 1983). In his earlier work, Stevenson counted six main dimensions to distinguish promoters from trustees: strategic orientation, commitment to opportunity, commitment of resources, control of resources, management structure and reward philosophy (Stevenson 1983; Stevenson & Gumpert 1985). In his later papers, he added two extra dimensions to his construct, entrepreneurial culture and growth orientation (Stevenson & Gumpert 1985; Stevenson & Jarrillo-Mossi 1986; Stevenson & Jarillo 1990). Brown et al. (2001) operationalized this construct by applying the factor analysis techniques, and finally identified six different dimensions for an entrepreneurial management construct. These six final dimensions were strategic orientation, resource orientation, management structure, reward philosophy, growth orientation and entrepreneurial culture. Table 2-1 shows Stevenson dimensions of EM.

The first two dimensions are strategic in the nature. While strategic orientation describes the main motivations behind the strategic decisions of organizations, the commitment to opportunity points to the mechanism and process of pursuing opportunities (Brown et al. 2001). In fact, the first deals with identification and selection, whereas the second concerns the pursuit of entrepreneurial opportunities (Kuhn et al. 2010). Regarding resources, the promoter is less concerned about the ownership of the resources and tries to minimize the resource set by having access to other's resources, while the trustee's main concern is the existing resources. In contrast to the promoter, who commits the resources gradually, the trustee analyzes the situation in advance and invests large but less reversible (Brown et al. 2001; Kuhn et al. 2010). The management structure of the promoter company is flat with

abundant informal networks, whereas the trustee prefers a traditional management structure with complicated hierarchies (Brown et al. 2001; Kuhn et al. 2010). The promoter's style intends to reward and compensate based on the discovery and exploitation of opportunities and has a sharp desire for rapid growth, while the trustee structure stands on responsibilities to recompensate and prefers a slower but steady pace of growth (Brown et al. 2001; Kuhn et al. 2010). Whereas the organizational structure of the promoter encourages idea generation and experimentation, the trustee only accepts those ideas which are related to the resource pool (Brown et al. 2001; Kuhn et al. 2010).

Table 2-1. Stevenson's conceptualization of entrepreneurial management

Entrepreneurial focus (promoter)	Conceptual dimension	Administrative focus (trustee)
Driven by perception of opportunity	← Strategic orientation →	Driven by controlled resources
Revolutionary with short duration	← Commitment to opportunity →	Evolutionary with long duration
Many stages with minimal exposure at each stage	← Commitment of resources →	A single stage with complete commitment out of decision
Episodic use or rent of required resources	← Control of resources →	Ownership or employment of required resources
Flat, with multiple informal networks	← Management structure →	Hierarchy
Based on value creation	← Reward philosophy →	Based on responsibility and seniority
Rapid growth is top priority; risk accepted to achieve growth	← Growth orientation →	Safe, slow, steady
Promoting broad search for opportunities	← Entrepreneurial culture →	Opportunity search restricted by resources controlled; failure punished

Adopted from (Brown et al. 2001)

The EM construct found less popularity in the entrepreneurship literature. Gartner and Baker (2010) stated that less than three percent of articles which cited Stevenson and Jarillo (1990) and Stevenson and Gumpert (1985) made any real attempt to examine and develop the EM measurement. Actually, Stevenson's studies are mainly cited for presenting an opportunity-based conceptualization of entrepreneurship rather than their achievement in developing a measurement for entrepreneurship (Kuhn et al. 2010). Therefore, this research has focused on EO and CE, which are broadly employed to measure the degree of FLE. It integrates

these constructs in a new and more comprehensive model that actually covers the opportunity-based conceptualization of entrepreneurship.

Integrated measurements of FLE

Lumpkin and Dess (1996) defined EO as processes, practices and decision-making styles that may lead to “new entry”. The new entry can be interpreted as the actual consequence of EO that explicitly points to entrepreneurial actions and outputs. These actions and outputs may be realized in the forms of new venturing, innovation or strategic renewal, which are the main components of CE. As previously mentioned, CE measures the actual entrepreneurial outputs and differs from EO, which has mainly focused on the predispositions of firms regarding their entrepreneurial methods, practices and processes (Simsek et al. 2007).

Zahra et al. (1999b) claimed that, orientation cannot always measure actions. The entrepreneurial actions of firms should be captured by their actual strategic choices. Actually, EO represents a firm’s tendency toward, rather than an actual engagement in FLE activities (Zahra 1991). He concluded that this measurement is not adequate to gauge the extent to which managers are committed to the exploitation of entrepreneurial opportunities. In fact, defining the entrepreneurship as creative thinking is not sufficient, because there are many creative thinkers who never realize their business ideas (Zahra 1993a), and there are a number of creative projects in organizations which are never completed. Consequently, while EO is an important aspect of FLE, it may not be sufficiently comprehensive (Zahra 1993a).

EO and CE complement each other (Antoncic & Hisrich 2001). EO provides an entrepreneurial mindset that acts as a basis to achieve CE outcomes (Dess & Lumpkin 2005). Therefore, neither entrepreneurial outputs nor orientation can demonstrate the precise situation of firm-level entrepreneurship, and researchers should benefit from examining entrepreneurial orientation as well as actual entrepreneurial outputs simultaneously (Dess 2003) to determine the entrepreneurial situation of a given organization. A firm may show a high degree of EO, but it does not guarantee a high degree of CE (B. George & Marino 2011), or vice versa.

Despite the complementarities of EO and CE and former recommendations to integrate them, they have developed few connections (Bouchard & Basso 2011), and efforts to bridge them together have been significantly few (Bouchard & Basso 2011). Researchers who employed an integrated measurement of FLE, for instance Antoncic (2007) and Kreiser and Davis (2009), broke down the widely accepted constructs and made new ones which borrowed some components of EO and CE. For instance, Kreiser and Davis (2009) just applied innovativeness, proactiveness and strategic renewal and ignored risk-taking, innovation and venturing. In the same way, Antoncic and Hisrich (2001) used new business venturing, innovativeness, self-renewal, and proactiveness and ignored other aspects. Antoncic and Hisrich (2001) excluded innovation to avoid a redundancy problem, but as was mentioned before, the innovativeness dimension reflects the tendency of firms to engage in creativity and experimentation, thereby departing from innovation as established practices and technologies (Lumpkin & Dess 1996). Despite the usefulness of these integrated constructs, they had two weaknesses: first, they broke down widely accepted constructs of FLE in new and less popular measurements, and second, they integrated components of different essence in the same construct. While the dimensions of EO were tendency-based and had focused on the proclivity of firms toward entrepreneurship, CE dimensions were concerned with entrepreneurial outputs. Integrating these different-nature components may lead to unclear empirical findings and misleading results.

To avoid the problems of former integrative measurements of FLE, Bouchard and Basso (2011) employed a taxonomy model which compared the degree of EO and CE and classified companies into two distinct categories: high EO/high CE and high EO/low CE. In this study, their model is extended to a four-fold taxonomy model by adding two extra categories.

2.3. FLE: A four-fold model

In the context of start-up entrepreneurship, there are those who are called “forced entrepreneurs” (K. D. Hughes 2006; Orhan & Scott 2001). Forced entrepreneurs are pushed by external forces to run a business. Perhaps, in the context of firm-

level entrepreneurship, we can find some companies that are pushed to have entrepreneurial outputs (CE) while they do not have a high tendency toward entrepreneurship (EO). By adding this category and another category that includes small non-entrepreneurial firms to Bouchard and Basso's (2011) classification, a four-fold taxonomy of entrepreneurial companies which includes non-entrepreneurial, latent entrepreneurial, forced entrepreneurial and actual entrepreneurial firms has been developed. Figure 2-2 shows the four-fold entrepreneurial taxonomy model of firms.

Figure 2-1. *The four-fold taxonomy model of firms*

This classification is not new in the context of start-up entrepreneurship, and there are plenty of studies which focus on this classification of entrepreneurs. Reviewing the start-up entrepreneurship conceptualizations and definitions of latent, nascent, forced and actual entrepreneurs (e.g. empirical studies of Global Entrepreneurship Monitoring (GEM)) clarify these concepts more precisely.

Latent entrepreneurs are those who are distinguished from other types of entrepreneurs by their declared preference for self-employment (Blanchflower et al. 2001; Grilo & Irigoyen 2006). They may or may not have an actual plan to become a self-employed (Grilo & Irigoyen 2006). Thus, this concept is usually referred to as the early stage of the entrepreneurship process (Brixy et al. 2012). The key differentiation between forced and actual entrepreneurs is their motivation to run a business. While forced entrepreneurs are influenced by push factors, actual entrepreneurs are pulled to start a business (K. D. Hughes 2006; Orhan & Scott 2001). In fact, the concepts of forced and actual entrepreneurs point to the “push” and “pull” motives behind the decision to establish a company (K. D. Hughes 2006;

Moore & R. E. Mueller 2002). Push factors are negative drives such as redundancy, unemployment, lack of work opportunities, job loss and job insecurity that force people to start a business. Pull factors are positive incentives like independence, increasing earnings and opportunities to carry out personal ideas which attract people to become entrepreneurs (K. D. Hughes 2006; Kautonen & Palmroos 2009; Ritsilä & Tervo 2002). Forced entrepreneurs are pushed into entrepreneurship because there are no other ways to provide for the cost of living (Bosma & Harding 2006).

In the four-fold model, non-entrepreneurial is a type of firm that is characterized by both low proclivity of top managers toward entrepreneurship and low actual entrepreneurial outputs. Actual entrepreneurial firms stand on the opposite end and truly convert the entrepreneurial mindsets and thinking (EO) to entrepreneurial outputs and actions (CE). Top managers of the forced entrepreneurial companies do not have a high proclivity for entrepreneurship, but are pushed by external forces to entrepreneurial action and outputs. The latent entrepreneurial firms are entrepreneurial companies which have a high tendency to apply entrepreneurial strategies and processes, but they do not have enough resources to convert these proclivities to entrepreneurial action and outputs.

2.4. Entrepreneurial Firms: characteristics and differentiations

The four-fold model separates four kinds of firms based on the degree of EO and CE. The first question that comes to mind about the model is, do the four kinds of firms really show different characteristics? There are a number of studies in the literature that investigate the main characteristics of entrepreneurial versus non-entrepreneurial firms. They have identified a number of unique characteristics of entrepreneurs and entrepreneurial firms that can be applied to differentiate them from small business owners or non-entrepreneurial companies. The most important characteristic, suggested by Schumpeter (1934), is called innovation. He introduced five kinds of behaviors that can be used as the special characteristics of entrepreneurial ventures: (1) introduction of a new product, (2) introduction of a

new production method, (3) entering a new market, (4) opening a new source of supply, and (5) industrial reorganization.

These behaviors were confirmed by other researchers, such as Vesper (1990) and Carland et al. (1984), and became the most important differentiation factor of entrepreneurial versus non-entrepreneurial firms. Vesper (1990) added another important feature to the profile of non-entrepreneurial firms. He mentioned that small business owners never intended to grow beyond what they consider as a controllable size. Glueck (1980) distinguished entrepreneurial from family firms by focusing on the goal of the establishment. While the former mainly focused on the best interest of the firm, the latter concentrated on the income and needs of the family as the main objective of the company. These findings were approved by Carland et al. (1984). Recently, Runyan et al. (2008) stated that non-entrepreneurial companies do not have a real plan for growth because they have different business goals and may work for a positive cash flow to remain in business. Need for achievement (McClelland 1961), personal ambitions (Davids 1963; Sexton 1980), desire for independence (Davids 1963), need for power (Winter 1973), growth orientation (Dunkelberg & Cooper 1982), challenge taking (Welsh & White 1981), and risk-taking (McClelland 1961; Palmar 1971; Welsh & White 1981) are some other distinctive characteristics which are mentioned in the literature.

Besides these distinctive characteristics of entrepreneurial firms, researchers found that entrepreneurs perceive the environment differently from non-entrepreneurs, and that these different perceptions can lead to different levels of performance or competitive advantage (Covin & Slevin 1989; Lumpkin & Dess 1996; Antoncic & Hisrich 2001). Entrepreneurs also consider the renewing of organizational procedures and strategies as a main instrument to adapt to environmental and industrial changes (Guth & Ginsberg 1990; Zahra 1991; Zahra 1993b). This strategy is known as strategic renewal.

3.Literature review

This chapter reviews the main theories and models of internationalization and international entrepreneurship, summarizes the primary findings of previous studies, and develops the research hypotheses. It starts by defining internationalization, and continues with describing the principal theories and models of it. Describing theories and models helps to find a correct position for the study in the internationalization literature. Then, the chapter reviews the former studies and develops the research hypotheses. Finally, a visual graph of the hypotheses is presented as the conceptual framework of the thesis.

3.1. Internationalization

There is no unique and widely accepted definition of internationalization (Mejri & Umemoto 2010). While one stream defines internationalization as the process of increasing involvement of companies in international activities (Johanson & Vahlne 1977; L. S. Welch & Luostarinen 1988), another explains it as the adaptation of firms' activities into the international context (Calof & Beamish 1995).

Internationalization has received significant attention in the literature, and a number of theories have been developed to explain its process and mechanisms among multinational giants as well as small and medium-sized companies. It seems that a historical review of internationalization theories can facilitate a clearer positioning of the study in the context of internationalization researches.

Classic theories of internationalization

These kinds of theories were mainly proposed by economists and dealt with internationalization at the national level. The most influential classic theories of internationalization were the theory of absolute advantage (Smith 1776), the theory of comparative advantage (Ricardo 1817) and the factor proportion theory (Ohlin 1933). All of these theories discussed internationalization at the national level and dealt with trade among countries.

The first theory that introduced firms as the level of analysis and discussed internationalization at the firm level was foreign direct investment. Hymer (1960) was the pioneer of FDI theory, and he and his followers focused on market imperfection to describe the internationalization of multinational giants. Vernon

(1966) presented a life cycle theory of internationalization. According to this theory, the process of internationalization, similar to the product life cycle, was an incremental mechanism that assumed different positions to reduce cost, based on the comparative advantages of the original country. Another classic theory of internationalization was the portfolio theory (Rugman 1976). Based on this theory, companies select their internationalization strategy based on the interaction of risk and profit.

Resource-advantage theory

This theory took a strategy point of view regarding the internationalization of organizations. It accepted internationalization as the process of adaptation to the international environment. From this perspective, companies use of their resources, skills and routines to adjust themselves to the international environment and secure their competitive advantage and superior performance (Mtigwe 2006; Teece et al. 1997). Based on this theory, companies can succeed in their internationalization if they correctly select markets which are compatible with their resources. From this point of view, internationalization is a strategic choice that leads to superior performance via improving competitive advantage.

Eclectic paradigm

This perspective was proposed by Dunning (1988) to explain the internationalization of multinational companies. This theory explained the causes of internationalization and predicted the international activities by a configuration of three advantages: ownership, location and internalization. The ownership returns to the company itself and points to the superiorities that a company has developed in the home market which are applicable in the international context. In contrast, location refers to the favorable conditions that a target foreign market provides for a company. The internalization shows the tendency of a firm to use of the advantages of ownership within its own organization or sell them to others.

The eclectic paradigm anticipates the foreign entry mode (FDI, export, or licensing) based on the interaction of ownership, location and internalization. If all advantages are met, the company prefers FDI. When the new market provides ownership

advantage, the company prefers internalization, and location advantages are low, export is selected. If the new market just represents ownership advantage, the licensing option is chosen.

Stage models

These theories were among the first to provide an explanation for the internationalization of both small and large companies. These models explain internationalization as an incremental process that includes several steps. The most important stage models of internationalization are the Uppsala model (U-model) (Johanson & Vahlne 1977) and the innovation-related model (I-model) (Bilkey & Tesar 1977) .

Johanson and Vahlne (1977) published a stage model of the internationalization, later called the Uppsala model, based on a study of four multinational Swedish companies. They observed that firms move along a series of incremental steps throughout the process of internationalization. They called this series of steps “establishment change”. Establishment change takes place through the four distinct stages of “*no regular export activities, selling via agent, sales subsidiary, [and] production subsidiary (P. 25)*”. The U-model describes internationalization based on the amount of resources committed and the degree of commitment. Internationalization is an incremental, multi-stage process that occurs by increasing the knowledge of the company regarding the foreign market, and subsequently designating a proper amount of resources. Therefore, this model views internationalization as a learning process.

The I-model presents a mechanism similar to the process of new product adoption for internationalization. In fact, this view regards the internationalization decision as an innovation for a company. Therefore, the innovation-related theory considers internationalization as a process of learning in connection with adoption of innovation. The I-model deals with two distinct bundles of impetuses for internationalization, namely “push” and “pull” factors. Push factors are external factors that force companies to extend their activities beyond their national borders. In contrast, pull factors are internal forces that encourage companies to have

international activities. In whole, the I-model accounts for three main steps in the process of the internationalization (Leonidou & Katsikeas 1996):

- 1- *Pre-export stage*: In this step, companies have no export; they search for information about foreign markets and sometimes may have very limited export activities.
- 2- *Export trial stage*: Firms start to export but in an irregular way; they consider the potential of extending their international activities.
- 3- *Advance export stage*: Companies broaden their export activities in a regular way and consider other possible modes of the internationalization.

Network perspective

The network perspective of internationalization is a complementary theory used with other perspectives to explain the internationalization of firms. This view describes internationalization as the process of creating and developing a network of relationships with foreign companies (Johanson & Mattsson 1988).

Johanson and Mattsson (1988) defined internationalization as an evolutionary process that is conducted in three sequential stages: (1) *market expansion*: finding a new position in a new market as a network; (2) *market penetration*: elevating an existing position and increasing commitment of resources in the network; and (3) *market integration*: improving harmony between different positions in the market.

From this point of view, the position of the firm in the network (market) is the most important driver for internationalization. The position is defined based on two main elements: degree of internationalization of the firm, and degree of internationalization of the network (market). According to these two main elements, Johanson and Mattsson (1988) defined four different positions of firms.

Early starter. This kind of firm is settled in a market where suppliers, competitors and other cooperative companies have no international relationships, and where the firm does not have access to information and channels of internationalization. Because these firms cannot find useful knowledge through the market or internal information systems, they prefer to use agents for entering foreign markets. These

agents are informed about a given foreign market and help the early starter to bridge the knowledge gap (Johanson & Mattsson 1988).

Lonely international. Suppliers, competitors and other partners of this kind of firm do not have access to the international market, but the company has enough experience and knowledge, which can be used in internationalization activities. This kind of firm has a better network position over its competitors because of the access to international markets (Johanson & Mattsson 1988).

Late starter. These firm is positioned in an environment where competitors, suppliers and partners have widespread international relationships, but the company does not have enough knowledge and experience about foreign activities. In fact, these firms have indirect relationships with foreign companies via their competitors, suppliers and partners. The lonely starter has a weaker network position than its competitors and faces difficulties building a tight network position (Johanson & Mattsson 1988).

International among others. This kind of firm is an experienced international company which works in a very internationalized industry. In this position, both the firm and external actors have sufficient experience and knowledge about international markets. Consequently, these companies have tight networks, which provide the necessary resources and enable them to enter foreign countries via cooperative strategies (Johanson & Mattsson 1988).

International entrepreneurship

This view of internationalization began with McDougall's (1989) comparative study of domestic versus international ventures. He defined international entrepreneurship as *"the development of international new ventures or start-ups that, from their inception, engage in international business, thus viewing their operating domain as international from the initial stages of the firm's operation"*(P. 387). Four years later, Zahra (1993a) expanded this definition to include corporate entrepreneurship. Based on Zahra's (1993a) conceptualization, McDougall and Oviatt (2000) redefined international entrepreneurship as the intersection of internationalization and entrepreneurship, describing it as "a

combination of innovative, proactive and risk-seeking behavior that crosses national borders and is intended to create value in organizations”(p.903). Zahra and George (2002) developed a new definition of international entrepreneurship by considering entrepreneurial opportunities, describing it as “...*the process of creatively discovering and exploiting opportunities that lie outside a firm's domestic markets in the pursuit of competitive advantage”(p, 262).* Oviatt and McDougall (2005) took this view and redefined international entrepreneurship based on entrepreneurial opportunities as “*the discovery, enactment, evaluation, and exploitation of opportunities – across national borders – to create future goods and services”(P. 540).* Despite these endeavors to define international entrepreneurship, it seems that its definition is still in a state of evolution (Fillis 2007).

International entrepreneurship includes studies of entrepreneurship crossing borders, and comparative studies of entrepreneurship across borders (Oviatt & McDougall 2005), and can be operationalized as a combination of innovativeness, proactiveness and risk-seeking in the international market (O'Cass & Weerawardena 2009). This perspective of internationalization is the most recent theory of internationalization, and together with the network perspective represents the state-of-the-art in internationalization studies (Mtigwe 2006).

3.2. FLE and internationalization

Most studies which investigate firm-level entrepreneurship have used EO. The primary aim of firm-level entrepreneurship studies to date has been to explore the influence of firm-level entrepreneurial activities on corporate performance. A huge body of empirical findings confirmed a direct positive relationship between EO and corporate performance (Lumpkin & Dess 1996; Wiklund 1999; Wiklund & Shepherd 2003; Wiklund & Shepherd 2005; Covin & Slevin 1989; Becherer & Maurer 1997). Notwithstanding these confirmations and a meta-analysis that was performed by Rauch et al. (2009) which approved a positive relationship between EO and performance, there are some studies that have found a weaker association (Lumpkin & Dess 2001; LEE et al. 2001), or none at all (Covin et al. 1994; G.

George et al. 2001; Hart 1992; Matsuno et al. 2002; Smart & Conant 1994). In sum, there is a lack of consistency among the empirical studies of EO and corporate performance (Rauch et al. 2009). EO sometimes, but not always, contributes to improve performance (Wiklund & Shepherd 2005), and even under specific circumstances may lead to poor performance (Hart 1992). Actually, EO is a necessary but not sufficient prerequisite for superior performance (Zahra & Covin 1995; Parkman et al. 2012).

CE, as formal and informal activities that lead to creating new ventures within existing business through product innovation, market development and entailing strategic renewal, is also positively associated with company financial performance (Zahra 1991; Zahra 1993b; Zahra & Covin 1995). Changing corporate entrepreneurship activities leads to positive changes in company performance (Zahra 1995). Regardless of more consistency among studies which investigate the association of CE and corporate performance, researchers argue that to achieve superior performance, companies must successfully recognize entrepreneurial opportunities, and at the same time develop the right mix of capabilities to exploit identified opportunities (Parkman et al. 2012). This means that a company should apply EO and CE simultaneously to achieve superior performance in the industry.

In spite of the former recommendations to study the intersection of internationalization, entrepreneurial orientation (Zahra, Jennings, et al. 1999a) and corporate entrepreneurship (Dess 2003), minimum progress has been made (Yiu & Lau 2008), and empirical studies of international entrepreneurship remain few in number and limited in focus (Dess 2003; O'Cass & Weerawardena 2009).

Similar to firm-level entrepreneurship within domestic markets, most international business researchers have applied EO to study entrepreneurship in the international context. Researchers have described EO as the antecedent of different dimensions of internationalization such as internationalization preparation (Knight 2001) and international performance (Jantunen et al. 2005; Mostafa et al. 2005). Zahra and Garvis (2000), in their empirical study of 98 large US companies, confirmed a positive association between entrepreneurial orientation and international

performance. These findings were reconfirmed by Balabanis and Katsikea (2003). There are several studies which investigate this subject among SMEs and have verified the positive effect of EO on the internationalization of SMEs (Nummela et al. 2004; Knight & Cavusgil 2004a; Clercq et al. 2005; Liu et al. 2011). Dimitratos et al. (2011) demonstrated the significant influence of entrepreneurship on the internationalization of Greek firms, while O'Cass and Weerawardena (2009) compared small and medium-sized exporters and non-exporters, and found a large difference between them based on their entrepreneurial intensity. Empirical studies also depicted a positive association between EO and the deployment of internationalization decisions, degree of internationalization, scope of internationalization (Ripolles Meliá et al. 2007), product development, overseas market-related explorative and exploitative capabilities (Lisboa et al. 2011), early and rapid internationalization (Zhou et al. 2007; Lan & Wu 2010) and discovering first-time entrepreneurial opportunities in international markets (Chandra et al. 2009).

The studies of emerging markets such as India and China corroborate these findings. Based on the analysis of 150 Indian SMEs, Javalgi and Todd (2011) approved a strong link between entrepreneurial orientation and the degree of internationalization. They concluded that EO, a commitment to internationalization, and the ability to leverage human capital are the most important factors that determine the international success of Indian SMEs. Zhang et al. (2012) performed a quantitative study among 117 Chinese SMEs and attested to the positive influence of EO on the internationalization of SMEs.

CE activities similar to EO are determinant in the context of international business. In fact, to be successful in the global market, companies should act entrepreneurially in their decisions regarding when, how and where expand their international activities (Dess 2003). CE with emphasis on venturing, innovation and strategic renewal is an important key for transition economy firms to transform into market-oriented companies that are ready to compete in the international context (Zahra, Ireland, et al. 2000a). A number of researchers who investigated firm-level entrepreneurship in the international context applied international

corporate entrepreneurship constructs and found a positive relationship between international entrepreneurial activities and corporate performance (Zahra & Garvis 2000). Zahra and Garvis (2000) theorized and empirically demonstrated that CE moderates the relationship between internationalization and financial performance. Their findings showed that companies with a higher degree of CE can achieve a higher level of performance through international expansion (Dess 2003).

Based on the empirical findings which confirmed a positive association between EO, CE and different dimensions of internationalization, especially for SMEs and conceptual studies that define SMEs' internationalization as an entrepreneurial activity (Knight 2000; Lu & Beamish 2001; Ibeh & Young 2001), it can be concluded:

***H1:** The degree of internationalization of actual entrepreneurial SMEs is higher than latent, forced and non-entrepreneurial firms.*

***H2:** The rate of international involvement of actual entrepreneurial SMEs is higher than latent, forced and non-entrepreneurial firms.*

***H3:** The international performance of actual entrepreneurial SMEs is higher than latent, forced and non-entrepreneurial firms.*

***H4:** The internationalization speed of actual entrepreneurial SMEs is higher than latent, forced and non-entrepreneurial firms.*

***H5:** A higher degree of EO leads to a higher degree of internationalization of SMEs.*

***H6:** A higher degree of CE leads to a higher degree of internationalization of SMEs.*

Earlier researchers mostly employed international entrepreneurial orientation (Knight & Cavusgil 2004a) or international corporate entrepreneurship measurements (Zahra & Garvis 2000), and found a positive relationship between these constructs and international performance. It is not surprising that these constructs positively influence international performance because they are similar

to some extent (Frishammar & Andersson 2008). In this study, the original constructs of EO and CE are applied to test the hypotheses.

To gain a better understanding, researchers should examine the associations between individual dimensions of EO and CE in addition to testing the entire constructs (Hornsby et al. 2002), because it is largely unclear how these dimensions individually influence corporate performance (M. Hughes & Morgan 2007). Researchers found different effects for each dimension of EO (Kuivalainen et al. 2007) and recommended studying prerequisites and outcomes of EO at the level of the dimensions (Rauch et al. 2009). EO and CE are different from their dimensions (B. George 2011), and investigating the effect of their individual dimensions needs deeper and independent methods of analysis.

Some researchers have confirmed a positive link between proactiveness (Kraus et al. 2011; M. Hughes & Morgan 2007), innovativeness (M. Hughes & Morgan 2007) and corporate performance. In a similar way, international business studies have also drawn the same conclusions and have shown different influences of the individual dimensions of EO on the internationalization of SMEs (Zhang et al. 2012). A number of international studies focusing on an individual dimension of EO affirmed a positive relationship between that dimension and the different aspects of internationalization, for example: proactiveness and internationalization (Denis & Depelteau 1985; Zhang et al. 2012; Lan & Wu 2010; D. Welch et al. 1996; Frishammar & Andersson 2008); innovativeness and internationalization (Knight 2000; Lan & Wu 2010); and risk-taking and internationalization (Yiu et al. 2007; Zhang et al. 2012; Lan & Wu 2010).

Kropp et al. (2008) illustrated that the decision of starting a new international business related to existing business is mainly influenced by proactiveness and risk-taking components of EO, and innovativeness has no effect on such a decision. Zhou et al. (2007) confirmed slightly different results and proved that proactiveness is the most influential dimension of EO, followed by innovativeness, but risk-taking is less salient. In short, it seems that the cornerstone of the role of EO in internationalization and corporate performance is undertaken by proactiveness (M.

Hughes & Morgan 2007; Kraus et al. 2011), and the number of researchers who have found proactiveness to be a positive influence is more than other dimensions of EO.

***H7:** The innovativeness, proactiveness, and risk-taking dimensions of EO have different influences on the internationalization of SMEs.*

Although the number of studies that investigate the effect of individual dimensions of CE on the domestic and international performance of companies are few compared to such EO studies, they also tell a similar story and demonstrate the different influence of each CE dimension (Zahra, Neubaum, et al. 2000b). Based on a study of 274 manufacturing SMEs in China, Yiu et al. (2007) indicated a positive relation between innovation and internationalization behavior.

***H8:** The innovation, venturing, and strategic renewal dimensions of CE have different influences on the internationalization of SMEs.*

3.3. The role of external environment

Rauch et al. (2009), on the basis of their meta-analysis of 51 papers, confirmed that there are some factors which moderate the association of EO and performance. They have identified two kinds of moderators, those that (1) relate to the context of studies and (2) to the measurement issues. The context of studies influences EO because they have mainly focused on the outcome rather than the process of EO (Dess et al. 2011).

In 1996, Lumpkin and Dess argued that the characteristics of external and internal environments may have an significant influence on the strength and direction of the relation of entrepreneurial orientation and corporate performance. Following this preposition, researchers identified different moderators for the EO-performance relationship, namely knowledge-based resources (Wiklund & Shepherd 2003), cultural diversity of management teams (Richard et al. 2004), and industry life cycle (Lumpkin & Dess 2001), among others. In spite of different moderators used by the researchers, there is a consensus regarding the influence of external environment on corporate entrepreneurship (Guth & Ginsberg 1990).

Covin and Slevin (1989) claimed that entrepreneurial orientation does not have a direct effect on corporate performance, and it influences corporate performance through interaction with the environment. The most common aspects of the external environment considered as the moderators in the empirical studies of entrepreneurship are environmental dynamism and environmental hostility (Moreno & Casillas 2008; Rauch et al. 2009).

Dynamic environments are markets that have specific characteristics such as short product life cycles, high level of industry innovation, unpredictable demands, and highly unforeseeable actions of competitors (Zahra 1993a; Wiklund & Shepherd 2005). Dynamism points to the perceived instability of the firm's market (Keats & Hitt 1988) arising from technological change, fierce competition, regulatory developments, and similar forces (Zahra 1993a; Zahra 1993b).

Zahra (1993b) found a positive relationship between entrepreneurship and performance among firms in a dynamic environment, while this relationship was strongly negative for companies that were in a stable environment. Miller (1988) noted the positive effect of innovative strategies on corporate performance in uncertain environments. Wiklund and Shepherd (2005), through analysis of 413 Swedish SMEs, demonstrated that while EO has a strong effect on performance, relying solely on this effect provides an incomplete understanding of small businesses' performance. They stated that the interaction among EO, access to capital, and environment dynamism furnishes a better understanding. These findings were mainly confirmed by international studies. Yeoh and Jeong (1995) asserted that export performance is enhanced when there is a fit between external environment and entrepreneurial orientation. Balabanis and Katsikea (2003) carried out a survey among 82 UK firms and found a positive association between entrepreneurial posture and export performance in dynamic environments. These results were approved by Dimitratos et al. (2004), who illustrated that the uncertainty in domestic environments positively moderates the relationship between entrepreneurship and international performance. Dynamism also forces companies to increase their emphasis on corporate venturing activities and renew themselves through innovation (Zahra 1993b).

H2a: *The international performance of actual entrepreneurial SMEs in dynamic environments is higher than latent, forced and non-entrepreneurial firms*

H3a: *The degree of internationalization of actual entrepreneurial SMEs in dynamic environments is higher than latent, forced and non-entrepreneurial firms .*

H4a: *The internationalization speed of actual entrepreneurial SMEs in dynamic environments is higher than latent, forced and non-entrepreneurial firms .*

H5a: *A higher degree of EO in dynamic environments leads to a higher degree of internationalization in SMEs.*

H6a: *A higher degree of CE in dynamic environments leads to a higher degree of internationalization in SMEs.*

Hostility refers to the negative aspects of the environment (Zahra 1993b) that causes uncertainty and unfavorable conditions which are beyond the control of firms. This aspect of the environment pushes managers to make decisions based on limited favorable options which have high potential to fail (Miller & Friesen 1982; Covin & Slevin 1989; Miles et al. 2011). Environmental hostility results from radical changes in industry or intensive rivalry (Zahra 1993a), and creates threats for firms' missions via intensifying competition or decreasing demand for the companies' products (Zahra 1991).

Most studies suggest entrepreneurial orientation and entrepreneurship activities as suitable strategic tools for SMEs in hostile environments (Covin & Slevin 1989; Lumpkin & Dess 2001; Miller & Friesen 1982; Miller 1983). Yeoh and Jeong (1995) stated that entrepreneurial exporting firms are expected to have higher levels of performance than conservative companies in a hostile environment while in benign environments, conservative export companies exhibit a higher level of performance. Zahra (1993b) alleged that as the hostility of the environment increases, companies will become more involved in corporate entrepreneurial

activities. These findings are confirmed by later studies by Zahra and Covin (1995) and Zahra and Garvis (2000). In brief, environmental dynamism and hostility intensify corporate entrepreneurship activities (Zahra 1991).

H2b: *The international performance of actual entrepreneurial SMEs in hostile environments is higher than latent, forced and non-entrepreneurial firms.*

H3b: *The degree of internationalization of actual entrepreneurial SMEs in hostile environments is higher than latent, forced and non-entrepreneurial firms.*

H4b: *The internationalization speed of actual entrepreneurial SMEs in hostile environments is higher than latent, forced and non-entrepreneurial firms.*

H5b: *A higher degree of EO in hostile environments leads to a higher degree of internationalization in SMEs.*

H6b: *A higher degree of CE in hostile environments leads to a higher degree of internationalization in SMEs.*

3.4. Conceptual framework

By reviewing the literature, three kinds of important relations are found that need to be investigated more, especially in a new context such as Iran.

Figure 3-1. The conceptual framework

The first kind of hypothesis - depicted by solid boxes and lines – is the main kind of relation that the author of this study wants to test. These main relations are covered by hypotheses one through six.

The second type of hypothesis, here hypothesis 7 and 8, designated by short-dash boxes and solid arrows, deals with the effect of individual dimensions of EO and CE. These hypotheses examine the effect of dimensions of the constructs and answer the question of if all dimensions have equal effect.

The third type of hypothesis is the moderator hypotheses – denoted by solid gray boxes and medium-dash arrows – investigates the moderating effect of environmental dynamism and hostility on internationalization, and re-examines the main hypotheses under these special environmental conditions.

4. Research methodology

The purpose of this chapter is to present an overview of the research design implemented by the researcher to perform the project. The chapter starts by defining the methodology and research methods, and continues by presenting the research design. The research process is explained in two distinct steps, confirmation and demonstration. The confirmation step consists of qualitative, multi-case study to confirm the model. The demonstration phase through a survey study that focuses on testing the hypotheses. Research methods, participants and sampling, variables and measurements, and data gathering and analysis are the other subjects that are described in this chapter.

Methodology is the cornerstone of every study and provides a fundamental roadmap and plan to perform the research. Unfortunately, sometimes “methodology” and “methods” are used interchangeably. This confusion may lead to non-comprehensive research plans that could not meet the main purpose of the research. Waltz (1979) recognized this confusion among students of international politics and stated:

“Have been much concerned with methods and little concerned with the logic of their use. This reverses the proper priority of concern, for once a methodology is adopted the choice of methods becomes merely a tactical matter. It makes no sense to start the journey that is to bring us to an understanding of a phenomenon without asking which methodological routes might possibly lead there”(P. 13).

Schensul (2008a) defined methodology as “ ... *the assumptions, postulates, rules, and methods—the blueprint or roadmap—that researchers employ to render their work open to analysis, critique, replication, repetition, and/or adaptation and to choose research methods*”(P. 516), and explained methods as “*the ways in which qualitative [and quantitative] researchers collect data to build their argument. Regardless of paradigmatic preference, all qualitative [and quantitative] research methods have common characteristics*” (Schensul 2008b) (P. 521).

Therefore, methodology and methods are different terms that point to different dimensions of a research study. While methodology refers to the logic and the whole plan of conducting scientific research, methods are tools that focus on specific problems. To clarify the differences, Moses and Knutsen (2012) applied the tools and toolbox metaphor. They proposed to consider the methods as tools

and methodology as a toolbox. In this chapter, the focus is on methodology, and the assumption is made that research methods are only one part of the research methodology. This chapter covers the research philosophy, research design, research methods, sampling and participants, variables and measurements, and research analysis.

4.1. Research philosophy

Research philosophy refers to the beliefs of the researcher that determine the way in which data should be gathered, analyzed, and used. Naturalism (positivism) and constructivism are two major philosophical views that are frequently discussed in business and political research.

From the ontological perspective, naturalists believe that there is a real world, independent of the observer, and it is uniform and orderly, while constructivists do not believe in the real world and frequently question the naturalist ontological perspective (Moses & Knutsen 2012). Constructivists believe that the world that we study is not singular and independent of the observer, and that all observational statements contain bias and can be understood in different ways, while naturalists assume that science can be obtained through careful neutral observations (Moses & Knutsen 2012).

There is no pure constructivist or naturalist, and every researcher has both orientations to a certain extent. This study is more positivist because it assumes a real world that can be understood through observational statements. These observational statements are independent of the researchers, and mainly committed to the generalization of results.

4.2. Research design

Cheek (2008) defines research design as “... *the way in which a research idea is transformed into a research project or plan that can then be carried out in practice by a researcher or research team. However, research design is more than just the selection of methods or techniques to be used in collecting data for a particular study. Rather, the term refers to and encompasses decisions about how the*

research itself is conceptualized, the subsequent conduct of a specific research project, and ultimately the type of contribution the research is intended to make to the development of knowledge in a particular area. Importantly, the process of developing a research design combines three broadly connected and interdependent components: the theoretical, methodological, and ethical considerations relevant to the specific project” (P. 761).

In fact, a research design is a plan of actions to be carried out in connection with a research project. It focuses on the procedures for performing the research, participants and sample, as well as methods and analyses. In this chapter, the research process, research methods, participants and sampling, variables and measurements and finally research analysis are discussed as the main components of the research design.

Research process

This study is conducted in two different steps, and each step recruits its specific methods, sampling, analysis and so on. The first step has been called the “confirmation phase”. The main purpose of this step is to assess the suggested four-fold model of FLE by investigating the main characteristics of each type. Actually, by selecting one case in each category and comparing them based on differentiation factors identified through in-depth interviews, the power of the model is evaluated. This step also provides further information for deeper discussion of the hypotheses. The second phase focuses on a wide-ranging survey among Iranian SMEs to test the hypotheses. This step, performed after the confirmation phase, demonstrates the influence of firm-level entrepreneurship activities on the internationalization of SMEs. This step is named the “demonstration phase”. Figure 4-1 shows the visual process of the research. These phases interact to infer a more comprehensive understanding of the role of firm-level entrepreneurship activities on the internationalization of SMEs, and expose a deeper evaluation for the four-fold model of FLE.

Figure 4-1. The process of performing research

Research methods

This research applies a mixture of qualitative and quantitative methods to perform the study. It was conducted in two distinctive phases that interact to deliver a more reliable and deeper understanding of FLE and its effect on the internationalization of SMEs.

The main purpose of the qualitative phase is to compare characteristics – those suggested in the literature as the fundamental differentiations of entrepreneurial versus non-entrepreneurial firms – of each type of firm defined by the four-fold model of FLE, and to investigate if each type shows different behavior regarding these characteristics. In this step, four companies were selected to cover all areas of the model. To select the appropriate companies that meet the conditions of each type, pre-phase interviews were conducted with experts who were familiar with the Iranian food industry in the provinces of Boushehr and Fars. They were asked to suggest some companies for each category. Through expert interviews, 30 companies were identified and EO and CE questionnaires were sent to them. Fortunately, 18 questionnaires were returned. By analyzing the questionnaires, eight NEs, four FEs, five LEs and one AE were recognized. Ultimately, four companies were selected, one for each type, and they were subjected to in-depth interviews.

To conduct the quantitative part, a survey study was carried out by distributing 230 questionnaires in the provinces of Boushehr, Fars, and Khorasan; 123 questionnaires were returned. Four questionnaires were removed from further analysis because of inaccurate or uncompleted data. In whole, 137 questionnaires met the primary conditions for further analysis. SPSS (V.21) was employed as the main statistical package to perform the quantitative analysis.

Participant and sampling

To date, most studies of firm-level entrepreneurship have been performed within the United States (Dess et al. 2011) and other developed countries, and there is a little understanding about such organizational activities in undeveloped or developing areas such as Latin America, Sub-Saharan Africa, Eastern Europe, the

Middle East and southern Asia (Wales et al. 2011). This research has focused on food and beverage SMEs in Iran to gain a deeper understanding of FLE in this neglected area. There is no a unanimous definition for the SME in Iran (UNIDO 2003). In Iran, small businesses are usually defined as companies with fewer than 50 employees, but definitions regarding medium-sized enterprises are few (Talebi, Irandust, et al. 2012a); therefore, researchers who have studied SMEs in the context of Iran usually applied the EU definition of SMEs (Talebi, Irandust, et al. 2012a; Ghanatabadi 2005; Ajdari 2007). The basic definition of SMEs by the EU is also applied in this research to identify the proper companies. Based on the EU definition, every firm which has the following features (Table 4-1) is labeled as an SME.

Table 4-1. The EU definition of SMEs

Enterprise Category	Headcount: Annual Work Unit (AWU)	Annual Turnover OR Annual Balance Sheet Total
Medium-Sized	< 250	≤ € 50 Million OR ≤ € 43 Million
Small	< 50	≤ € 10 Million OR ≤ € 10 Million
Micro	<10	≤ € 2 Million OR ≤ € 2 Million

Adopted from Commission (2005)

This study also employs the simple random sampling technique. In this probability statistical sampling method, every entity in the population has an equal chance to be selected. The sample size has been calculated based on 95% of the confidence level and less than 10% of the confidence interval. Because the size of the population was not clearly specified, the indefinite sample calculation formula has been applied. The calculated confidence interval for the sample size of 137 is about 8.37%. This size of the sample meets our requirements because its confidence interval at the confidence level of 95% is less than 10 percent.

$$n = \frac{Z^2 pq}{d^2}, d = \sqrt{\frac{Z^2 pq}{n}}, d = \sqrt{\frac{1.96^2(0.25)}{137}} = 8.37\% \leq 10\%$$

There are a number of databases that were used in former studies to identify the target companies, for instance the TPO directory (Zanjani 2007), the KOMPASS7 business to business database (Ghanatabadi 2005), and so on. These databases have no sufficient data concerning SMEs in Iran. Hence, governmental archives were

used in addition to these databases to identify the proper companies. The most important archives employed belonged to the Institute of Standard and Industrial Research of Iran (ISIRI) in Bushehr and Fars, the Bushehr Fisheries Organization and the Iran Small Industries and Industrial Park Organization (ISIPO) in Khorasan.

Most of FLE studies accepted the CEO as the major character of SMEs who reflects the fundamental characteristics of the company (Covin & Slevin 1989), and conducted interviews and surveys among CEOs as the representative of the entire SME is an accepted approach (Rauch et al. 2009). Therefore, this approach was selected for this research, and all interviews were performed and all questionnaires sent to the CEOs of the companies.

Variables and measurements

Research variables

This research contains four kinds of variables: independent, dependent, moderator and control. Each type is explained under a distinctive title and the conceptual and operational definitions are presented.

Dependent variables

Internationalization has been examined as the response variable of the research. It is conceptualized as the process of increasing involvement of companies in international activities (Johanson & Vahlne 1977; L. S. Welch & Luostarinen 1988) and consists of three distinctive dimensions: international involvement, international performance and internationalization speed. International involvement points to the domain of the operation of a company, and is operationalized as a dummy variable. It takes “1”, if the company has international sales and “0” for firms, which do not have any international activities. The most common operationalization of international performance is to define it as a percentage of total sales (Dimitratos et al. 2004; Frishammar & Andersson 2008). Some researchers have added internationalization scope as the second dimension of international performance, and explained it as the number of foreign countries in which the company has operated (Zhang et al. 2012; Lin 2011). Hence, the

internationalization is operationalized as the total aggregate of international performance and internationalization speed, if the company operates in cross-border markets. International performance includes the total sales ratio and the number of foreign countries that the company selects as its target markets. Internationalization speed is measured as the amount of elapsed time (in years) between the year of the firm's inception and the year of its first international sale (Reuber & Fischer 1997; Zahra et al. 2003).

Independent variables

FLE, entrepreneurial orientation (EO) and corporate entrepreneurship (CE) are respectively defined as the main and subsidiary independent variables of the study. FLE is conceptualized as the process of discovering, evaluating and exploiting entrepreneurial opportunities (Shane & Venkataraman 2000) in existing companies that leads to new entry (Lumpkin & Dess 1996). EO refers to strategies, processes and decision-making styles (Lumpkin & Dess 1996) and shows the tendency of CEOs to accept innovative ideas, act proactively and make risky decisions (Covin & Slevin 1991). CE points to new venturing and innovation in existing firms that may take place as the outcome or input of strategic renewal (Zahra 1991; P. Sharma & Chrisman 1999). While some researchers have applied these constructs interchangeably, this study separates them, and refers to all types of entrepreneurial proclivities and activities in existing companies as FLE that is composed of two different dimensions, EO and CE. While EO is a tendency-based construct that deals with proclivity and orientation of firms toward entrepreneurship, CE is an outcome-based construct and focuses on actual entrepreneurial activities.

FLE is operationalized based on the proposed four-fold model, and is defined as a nominal variable which takes the four different values of non-entrepreneurial, forced entrepreneurial, latent entrepreneurial, and actual entrepreneurial. These values are determined by the degree of EO and CE for each firm. EO is operationalized as the total aggregate of the CEO's orientation to be innovative, tendency toward taking risks and proactiveness (Miller 1983; Covin & Slevin 1989). CE is measured based on the involvement of a firm in innovation activities

(introducing and developing products, production process, and organizational methods), venturing (expanding operations in new and/or existing markets), and strategic renewal (changing the scope of business and/or its competitive approaches) (Zahra 1991; Simsek et al. 2007).

Moderator variables

The environmental factors of environmental dynamism and environmental hostility were selected as the moderators because a number of former studies applied them as the moderation factors that may influence the relation of FLE and corporate performance (Rauch et al. 2009). While environmental dynamism points to the positive aspect of the environment that provides more opportunities for companies to exploit (Zahra 1993a; Zahra 1993b), environmental hostility refers to the negative aspect of the environment (Zahra 1993b) that causes uncertainty and unfavorable conditions which are beyond the control of firms. Those are respectively operationalized as the sum of the rate of product obsolescence, predictability of competitor's actions, predictability of demand and consumer tastes, rate of technological change and rate of change of the firm's marketing practices (Khandwalla 1977; Miller & Friesen 1982), as well as the aggregate of the threat of the environment to survival, price and quality competition, dwindling markets, scare supply of labor and material, and government interference (Khandwalla 1977; Miller & Friesen 1982).

Control variables

Control variables are factors that can influence the dependent variable and should be controlled to gain more precise conclusions. The most influential variables identified in previous empirical studies are firm size (Rauch et al. 2009; Wiklund & Shepherd 2005; Zhang et al. 2012; Javalgi & Todd 2011; Ripolles Meliá et al. 2007), international experience of the CEO (Lan & Wu 2010; Jantunen et al. 2005; Zhang et al. 2012; Dimitratos et al. 2004), and familiarity with foreign markets (Johanson & Vahlne 1977; Dimitratos et al. 2004). These variables are operationalized as the number of employees in the current year (Dunning 1988; Pan et al. 1999), the number of years that the firm's CEO has spent studying and

working abroad (McDougall et al. 2003), and the amount of similarity of mentality and language, socio-cultural norms and socio-cultural values between the domestic and target international market (Johanson & Vahlne 1977; Root 1994).

Research measurements

Wiklund (1998) stated that employing validated measurements developed by former studies is preferable to developing original ones. Therefore, this research uses standard measurements and questionnaires to conduct the survey study. Table 4-2 shows these measurements and detailed information about their developers. Earlier researchers successfully applied these measurements and confirmed their validity and reliability.

Table 4-2. The applied measurements

Variables	Measurment
Entrepreneurial orientation (EO)	Covin and Slevin (1991) Measurement.
Corporate Entrepreneurship (CE)	Simsek et al. (2007) Measurement.
International Performance (IP)	Lin (2012) and Dimitratos et al. (2004) Measurements.
Internationalization Speed (IS)	Reuber and Fischer (1997) and Zahra, Matherne, and Carleton (2003) Measurements.
Environmental Hostility (EH)	Miller and Friesen (1982) Measurement.
Environmental Dynamism (ED)	Khandwala (1977) and Miller and Friesen (1982) Measurements.
Firm Size (FZ)	Dimitratos et al. (2004) Measurement.
Psychic Distance (SD)	Dimitratos et al. (2004) Measurement.
International Experience (IE)	Dimitratos et al. (2004) Measurement.

An item of CE measurement which points to internationalization was removed because of its overlap with internationalization as the dependent variable.

Validity, reliability and trustworthiness

This research is a mixed-design study that incorporates the survey and multi-case study approach to gain a deeper understanding of FLE and its effect on the internationalization of SMEs. Research trustworthiness strategies and validity and reliability techniques are respectively discussed to secure the multi-case study and survey approach.

Research trustworthiness – case study research

Trustworthiness is a criterion to test the quality of the research (Yin 1994) and may be considered as the goal of the research (Guba & Lincoln 1989). There are some strategies to determine the trustworthiness of qualitative researches called verification strategies. Verification refers to the strategies that are used during the research process to ensure the reliability and validity of the research (Morse et al. 2008).

The main verification strategies of qualitative studies are methodological coherence, sample appropriateness, concurrent collecting and analyzing data, and thinking theoretically (Morse et al. 2008). Data coherence points to the congruence between the research question and components of the method. The main question of the qualitative part of the study was if each different kind of firm that is determined by the four-fold model is really different. To answer this question, the main differences among entrepreneurial and non-entrepreneurial companies were identified through the literature, and four firms (one for each type) were selected and evaluated through semi-structured, in-depth interviews. Therefore, the method components of participants, instruments and process are well matched with the research question and provide acceptable data coherence.

The second strategy is the appropriateness of the sample; as previously mentioned, the cases were selected to cover all categories of the model. The cases were dissimilar and sometimes acted in a contrary nature to ensure more reliable data. This procedure of selection of cases supports the idea of sample appropriateness.

To secure the reliability and validity of the research the cases were selected in a way to ensure better access and reinforce the concurrent collecting and analyzing of data. The interactive and mutual process of collecting and analyzing data enhances the trustworthiness of the research.

The technique of thinking theoretically was always applied to procure better and more reliable results. The key differentiation factors were deducted from the literature, examined among the cases and then reconfirmed through empirical data and former studies.

Morse et al. (2008) declared that these verification strategies incrementally and interactively contribute to build reliable and validated research. Hence, based on their reliability and validity procedure, it can be concluded that the research has an acceptable reliability and validity.

The verification strategies of Morse et al. (2008) have mainly focused on internal validity and ignore external validity, pointing to the degree of generalizability of the findings. Merriam (1995) suggested four distinctive techniques to enhance generalizability and improve the external validity of a study. These techniques were called thick description, multi-site design, model comparison, and sampling within. Thick description refers to providing enough information about the cases and their situation. Therefore, other researchers can assess their research situations and cases' characteristics whenever they want to apply the finding of a research study. The cases, their characteristics and conditions are extensively described to provide this kind of information for readers and future researchers. The multi-site design is very similar to sample appropriateness and points to the use of different cases, especially those representing some variation.

Model comparison compares the samples, events or programs with the majority of others in the same class. Entrepreneurial firms are compared with their counterparts in start-up entrepreneurship studies to gain a better and deeper understanding. Sampling within refers to considering different parts and individuals in the process of data gathering. In this research, whenever and wherever it was possible, more than one person was met and interviewed in the company (in an informal way). The accessible archival data were also investigated to improve the variety of data sources.

Validity and reliability - survey study

Valid and reliable measurements are the necessary condition for performing successful studies of business and science (Knight 1997a). If the validity of applied measurements in a discipline have not been approved, that field is not classified as science (Peter 1979). Therefore, demonstrating the validity of measurements is a necessary and vital step in the process of data analysis.

Validity is the extent that a measurement is truly gauging the concept which it is supposed to measure (Peter 1979; Peter 1981). Although validity is usually discussed as a separate concept of reliability, in fact, reliability is just one dimension (Venkatraman & Grant 1986), or perhaps the necessary condition (Knight 1997a) of the overall concept of validity.

Reliability refers to the degree to which measurements are free from error (Peter 1979). Actually, it points to internal consistency and reflects the accuracy of the instruments in different conditions. There are a number of techniques to assess the reliability of instruments, such as Cronbach's alpha and reliability coefficient of structural equation models (Venkatraman & Grant 1986). The most popular method to evaluate reliability is Cronbach's alpha (Knight 1997a). This method is applied to demonstrate the reliability of measurements.

However, researchers and experts suggested different dimensions of validity such as content, convergent, discriminant, and nomological validity in addition to internal validity (Reliability) (Venkatraman & Grant 1986). In this study, just content validity is used to avoid the complicated statistical methods that are necessary to calculate other dimensions of validity. Validity is defined as the degree to which a measurement gauges the constructs that are intended to be measured, and is evaluated by assessing the consistency of experts' analysis about the measurement. Because the questionnaires used in this research are standard questionnaires that have been widely applied by former researchers and experts who have confirmed their validity, just the reliability is discussed in the research.

Data gathering and analysis

Data gathering

As was mentioned before, this research is performed through two distinctive phases that interact to gain a deeper understanding of the subject. The first step - the confirmation phase - is a multi-case study approach that mainly relies on the qualitative data gathered through in-depth interviews with the CEOs of the firms. In this step, four companies were selected that cover all categories of the proposed four-fold FLE model .

In the survey phase, data were gathered via standard questionnaires. All questionnaires were sent to the firms' mail addresses and followed up by phone to increase the response rate.

Data analysis

To analyze the qualitative data, coding, categorizing and reasoning techniques were employed to compare the companies in different themes that had been identified in the literature. In fact, through studying former studies about distinctive factors and characteristics of entrepreneurial firms and designing an interview based on these differentiation characteristics, a unique data set was gathered regarding each type of entrepreneurial company. There is a simple logic behind the qualitative phase: if different types of companies show different values and contents about identifying characteristics, then it can be concluded that the model empirically has the potential to identify and separate different types of companies based on their FLE situations. However, if all companies that are matched with different types of the model depict similar values for identifying characteristics, it is clear that the model does not have the enough empirical potential and is only defensible from a theoretical perspective.

To perform the survey part of the study, two types of independent variables were considered, nominal and interval. To test the hypotheses that were included, the nominal variable (FLE), the ANOVA, and dummy regression models were recruited. To examine other hypotheses which contained interval variables, other kinds of regression models, such as hierarchical and moderated regressions, were employed.

5. Case study analysis

This chapter describes the cases, their contexts and their histories. It analyzes the behaviors and characteristics of the cases in eight different themes which were previously identified through the literature and discussed in Chapter 2. These characteristics are goal of establishment, vision of the firm, reaction to competitors, perceived environment, risk tendency, innovation posture, organizational renewing and perceived obstacles of entrepreneurial actions.

As mentioned before, the multi-case study research and qualitative analysis techniques are applied to investigate the empirical potential of the FLE four-fold model in the research context. This process took place in two different steps. First, the literature was reviewed to find the fundamental characteristics of entrepreneurial versus non-entrepreneurial firms. About eight specific characteristics were identified that were discussed in Chapter 2. In this chapter, the second step that contains the qualitative analysis and description of the cases is presented.

5.1. Case description (background)

Four companies were selected to be investigated more deeply. The interviews were conducted with the CEOs personally, and have been supplemented continued and modified by phone at least one time each.

Non-Entrepreneurial (NE) firm. This company is an aviculture business established in 2009 by a young person without business experience or formal business education. The company is a family business that supports two families and is mainly financed by government loans. The CEO of the company passed 72 hours of free entrepreneurship courses and prepared a brief business plan for its start-up. The CEO works with his father to manage the business, and they rely heavily on their personal networks to buy suitable raw materials and sell the finished products. The main product of the company is live chickens that are sold to abattoirs. The abattoirs process them and produce chicken meat, frozen chicken, chicken nuggets and sometimes chicken schnitzels.

About 6 people work on the production line, all of them with Afghani nationality, and all are immigrants who accepted such hard work. The domestic market for

chicken products is very wide with a large amount of unsatisfied demands. To meet this necessary gap, the Iranian government helps people to expand the aviculture businesses. Some associations exist that can give free consultation and financial and technical aid to such businesses. Despite these resources, there are a limited number of monopolistic companies who buy all products from these kinds of companies around the country. They have very strong bargaining power and easily drive the market. These monopolistic buyers are middlemen who work with abattoirs around the country.

The company is also faced with weak bargaining power on the supply side. Their suppliers are mainly governmental associations or big importers who have very inflexible procedures that cause many problems in the supply chain. The suppliers are mainly divided in two main groups: governmental and private importers. The former proposes lower prices, but the company should pay in advance and agree to a forced delivery time. The governmental suppliers usually do not respect the agreed upon delivery time and the company often waits longer to receive the supplies. This behavior causes many problems for the company, and forces it to deal with private suppliers who offer higher prices.

The CEO does not have any experience in marketing, business development and entrepreneurial strategic planning. He mainly consults with others working in the same context. Therefore, the company mostly follows a traditional shopkeeper management style, and its main goal is to take in enough income to cover costs and support the families.

Forced Entrepreneurial (FE) firm. The main production area of this company is cultivating shrimp using natural seawater. Therefore, this company is positioned in an industrial zone that is especially designed for this purpose on the seashore. All companies around it have the same products, and they cooperate well with each other.

The CEO established the company in 2007 by borrowing from government banks. The firm has seasonal production; it is on standby during the winter and is heavily loaded with work in the summer. About 6 people are working as full-time

employees, and about 50 more seasonal workers are recruited in the spring and summer.

The CEO of the company has the relevant formal education for his production, but he does not have any formal or informal business and marketing education. He is a local man who is very familiar with the local weather, people, associations, and procedure for cultivating shrimp using natural seawater. He has a very good relationship with the fishery administration, and his formal education in the fishery and shrimp business helps him to have acceptable production. Unfortunately, he suffers from a lack of sales and business skills that force him to rely on other companies.

The sole supplier and also the forced buyer of the companies is a big monopolistic firm that produces food using shrimp by employing state-of-the-art technologies. This means that the monopolistic supplier signs tight contracts with the companies to supply them if and only if they agree to sell their finished products to the supplier. Therefore, the firm does not have high bargaining power on both the supplier and customer sides, and it is pushed to accept the prices for raw material and finished products determined by the monopolistic company.

These forced contracts have their pros and cons. Besides some disadvantages, such as dictated prices for raw materials and finished products, they force the companies to apply recommended technologies, procedures and production processes determined by the monopolistic company. The firm is continually checked by the experts and consultants of the monopolistic company to examine their procedures, strategies, production processes and so on. These experts introduce new technologies and machines, and help the company to renew its administrative and production strategies and methods.

Latent Entrepreneurial (LE) firm: This company was started by a very ambitious, young and educated person who had a high desire to create one of the most innovative and pioneering companies in his industry. His main areas of production are industrial pizza and some pre-cooked foods. He has applied state-of-the-art technologies based on his budget, and has chosen them rigorously by

conducting careful research. This company is a three-year-old firm with 11 employees, all recruited by the CEO.

The CEO has many years of experience and formal education in the food industry, and through extensive research has discovered an unsatisfied demand for pre-prepared pizza. He investigated many pre-cooked pizza production systems around the world, especially in European countries, and selected the best budget-matched production system for his needs. All employees are interviewed in-depth by the CEO in a very interesting and sophisticated way to gain employment. The compensation system rewards employees with new ideas or who help the company to advertise and sell its products in more creative ways.

The company freely chooses its suppliers. Actually, the main factor for selecting a supplier, besides the optimal price, is the quality of the raw materials. The purchasing manager of the company is a very engaged man who travels great distances to find the best quality of materials.

Although there are some restrictions for the sales process of the company because there are just a limited number of professional distributors in the Iranian food industry, they focus on other sales strategies such as personal and network-based sales to private and governmental organizations.

Actual Entrepreneurial (AE) firm: This company is the biggest and the oldest of all those selected for this research. It was established in 1994 through personal financing. It gradually added a number of different production lines, and followed the product diversity strategy to penetrate the local, national and international markets. The main products of the company are drinks, hamburgers, and sausages, but this company has some spin-offs that produce other kinds of products such as spaghetti, potato chips, cheese puffs and so on. The company is one of the main players in the local market, and tries to control market demand and sometimes change customer tastes. The CEO had not undergone any formal business studies when he started the company in 1994, but later he recognized the necessity of a business and management education and enrolled in several college programs.

The company does not feel any restrictions from the supplier or even customer sides. It is a pioneer and leader in the industry, and has earned a well-established position in the market. In addition, it is a very famous local brand, and has a high bargaining power with both suppliers and buyers.

5.2. Research findings

A number of in-depth interviews were performed with the companies to test their differences regarding the main characteristics mentioned as the substantial differences between entrepreneurial and non-entrepreneurial firms.

Goal of establishment

All the companies, with the exception of AE firm, mentioned dealing with the cost of living as the main goal or at least one of the important goals to start up the business. For example, the CEO of the NE firm stated that:

“After finishing my mandatory military service, I was wondering how could I afford to take care of my family. Then I heard that the banks have some loans to support the new businesses in our area. So I grasped this opportunity to run my own business. Of course, having your own business has more social prestige than being employed and working for others.”

The FE firm pointed out partial independence, and the LE firm mentioned the interest in having your own business, as other goals of establishment. Among all the firms, the AE firm did not refer to keeping up with the cost of living as the goal of establishment, and insisted that personal aspirations were the main goal of the start-up. These findings are in accordance with Carland et al. (1984), who found family income as a principal characteristic that distinguishes entrepreneurs from non-entrepreneurs.

Vision of the firm

The NE and the FE firms had focused on remaining in the business as the optimal vision, while the LE firm thought differently and cited business growth as its vision. The CEO of the AE firm surprised us when he exclaimed:

“We want to work hard to take the biggest share of the market among our competitors and be the most powerful company among all. We will fight to exert our dominance.”

The NE and the FE firms are true examples of Vesper's (1990) small-business owners who never intend to grow beyond a specific level. These companies do not have a real plan for growth because they have concentrated on distinctive business goals, and may work for a positive cash flow to remain in the business (Runyan et al. 2008).

Reactions to competitors

The reactions of the firms toward competitors were very different, and they had applied different strategies based on their conditions. The FE firm built complete cooperation with its competitors. This firm had a huge dependency on its monopolistic supplier, who constrained the firm to sell the finished product at a given price. This supplier enforced all decisions of the FE. The CEO of the FE firm noted:

“We work as a family here. All companies help each other to achieve satisfying production. Honestly, we are companies that have very tight contracts with a bigger and more powerful one so we must work together”

The NE firm had a slightly different strategy, and while it had focused on its interaction with competitors, it sometimes applied more aggressive strategies - but not so intensive as to provoke competitors. The LE firm moved based on safer competition that means, desiring to challenge small competitors, who have lower competitive powers. The most aggressive competitive strategy was applied by the AE firm. This firm intensively challenged its competitors and tried to remind them of its superiority; thus, this firm reflected a real picture of Welsh and White's (1981) challenge taker.

Perceived environment

Empirical studies have claimed that entrepreneurial and non-entrepreneurial firms may have different perceptions regarding the environmental factors, and that this differentiation can lead to different corporate performance (Covin and Slevin 1989;

Antoncic and Hisrich 2001). This study, however, could not find any supportive clues for different perceptions of investigating companies regarding the environment turbulent, and all firms mentioned environment as a challenging and turbulent context.

Risk tendency

Many researchers considered risk perception and risk-taking as key factors that can separate entrepreneurs from non-entrepreneurs (McClelland 1961; Palmar 1971; Welsh & White 1981) or non-entrepreneurial companies from entrepreneurial enterprises (Miller 1983; Covin & Slevin 1991; Lumpkin & Dess 1996). The findings showed that each kind of entrepreneurial firm had different perceptions and accepted different levels of risk. The FE firm hated risks, and it even avoided certain risks. The CEO of the company mentioned:

“I don’t have a tendency toward risk and I cannot make such decisions that their results are uncertain for us. We try to avoid the risky and uncertain decisions. We respect our industry standards.”

Absence of autonomy and controlling everything by a superior supplier who dictates everything besides the cooperation strategy may be the principal drivers of this kind of behavior. The NE firm had a less-intensive feeling about the risk. It tried to avoid taking risks, but in some cases it made some small risky decisions. While the AE firm accepted well-balanced and moderate risks, the LE firm tolerated more, and sometimes gambled with risk. This is in contrast to the idea that the degree of uncertainty about the outcome increases the gap between nascent and actual entrepreneurs (Stam, Audretsch, and Meijaard 2005). The best explanation for the LE firm taking more risks than the AE firm is accumulating experience; for example, having more experience enables the AE firm to better analyze risks and rewards, and thus take more reasonable risks.

Innovation posture

The FE firm was forced by an external superior supplier to be innovative. The supplier imposed new technologies and modern production processes to enhance the productivity of the FE. Consequently, there was a mutual relationship between

the forced entrepreneurial firm and the superior supplier, which finally led to a better performance for both. The NE firm hesitated with innovation, and preferred standard procedures and well-experienced technologies.

The LE firm had an extreme desire to have innovative technologies, and to get access to these kinds of innovations made very risky decisions. The CEO of the company blustered:

“The most important strategy of our company is to get access to the state-of-the-art technologies around the world, applying them in our production processes and improving our products continuously through recruiting modern technologies. I am ready to consume a huge part of our money on such innovative technologies”

In spite of the intense desire, the latent entrepreneurial firm was not very successful in implementing innovation because of its lack of resources. The AE firm had a lower desire to apply new technologies, but it actually employed more innovations. In fact, the actual entrepreneurial firm has both access to sufficient resources and the desire to implement innovations. Therefore, it implemented more innovations in spite of its lower tendency to implement innovations. These findings coincide with empirical studies that state entrepreneurs are more innovative than non-entrepreneurs (Carland et al. 1984; Miller 1983).

Organizational renewing

While the FE firm was forced to renew its organizational structure, plans and sometimes its staff through an external company, the NE firm never thought about redesigning its structure, plans and strategies. The CEO of the NE firm stated:

“We just focus on existing designs and processes. All companies that I know apply the same design and process and these processes and designs become the standards of our business. We cannot change the standards and remain in the business.”

The LE firm had focused on innovation and growth, and was ready to take greater risks to implement new technologies, but it was completely silent regarding renewing its organizational structure. In fact, it thought that the existing structure,

plans and strategies were sufficient to achieve current goals. The AE firm wanted to be number one, and tried to prove its dominance in the industry by employing an active strategy for organizational renewing. It redesigned its plans, strategies and organizational structure every year to exactly correspond with industrial changes.

Perceived obstacles to entrepreneurial actions

Besides other factors that were identified through the literature, the results showed that the investigating firms have different perceptions regarding existing obstacles for entrepreneurial actions. Prior empirical studies have found the lack of financial resources, administrative complexities and risk tolerance as the main obstacles to convert latent to actual entrepreneurs. They also exerted that while the lack of financial resources may affect the actual entrepreneurial actions, the administrative complexity influences the preferences and tendencies to be an entrepreneur (Grilo and Irigoyen 2006). This is exactly what the LE firm mentioned as its obstacle for implementing effective entrepreneurial actions. The FE firm pointed out a different obstacle that originates from external constraints. This confirms that the low degree of autonomy may reduce faster or more effective entrepreneurial actions (George and MARINO 2011). The AE firm implied the lack of innovative ideas as the main blockage to improve its entrepreneurial activities. While the AE firm alluded to the lack of ideas, the NE firm noticed the unjustifiability of ideas, in addition to the scarcity of proper insurance, as the obstructions that may decelerate entrepreneurship in organizations.

5.3. Model confirmation

Table 5-1 summarizes the characteristics of each type of firm based on the main factors that were identified as the contrasts of entrepreneurial versus non-entrepreneurial firms.

Table 5-1. Distinctive characteristics of investigating firms

	NE	FE	LE	AE
Goal of Establishment	Prestige, Cost of Living	Cost of Living, Partial Independence	Cost of Living, Business Interests	Personal Aspirations
Vision of the Firm	Survival	Survival	Growth	Dominance
Reaction to Competitors	Interactive Competition	Friendly Cooperation	Safe Competition	Fierce Competition
Perceived Environment	Challenging	Indirect but Challenging	Challenging	Challenging
Risk Tendency	Risk Averse	Risk Hater	Risk Taker	Well-balanced Risk
Innovation Posture	Hesitator	Bound	Fond	Implementer
Organizational Renewing	Non	External	Silent	Internal
Obstacle to Entrepreneurial Actions	Unjustifiable Ideas and Absence of Insurance	External Constraints	Lack of Financial Resources	Lack of Innovative Ideas

These findings revealed fundamental differences among the investigated firms that were chosen via the entrepreneurial four-fold model. All firms showed different values of reaction to competitors, risk tendency, innovation posture, organizational renewing, and perceived obstacles to entrepreneurial actions. They also demonstrated smaller differences in the goal of establishment and the vision of the firm. These companies only depict the same behavior in the perception of the environment. In summary, the investigated firms showed different behaviors in almost all characteristics that were mentioned as the main differences of entrepreneurial versus non-entrepreneurial firms, except one. Therefore, it can be concluded that the four kinds of firms that are determined by the four-fold model are companies which are actually different. This conclusion demonstrates the potential of the model to separate companies in the research context.

6. Survey analysis

In this chapter, the research hypotheses are tested by applying the proper quantitative techniques. Before presenting the analysis and conclusions of the hypotheses and the validity and reliability of the instruments, the selection and fitness of statistical techniques are discussed. Whenever possible, more than one technique has been applied to test the hypotheses to compare the results and infer more precise conclusions.

Quantitative analysis techniques are employed to test the research hypotheses. Before the results of the analysis are discussed, a logical discourse is presented regarding validity and reliability of questionnaires, data summary and description, selection of statistical techniques and their statistical fitness.

6.1. Validity and reliability

All parts of the survey questionnaire were developed by former researchers, all renowned in the area of internationalization and entrepreneurship studies. Therefore, the questionnaire has an acceptable content. To test the reliability of the questionnaire, the Cronbach's Alpha was employed. Table 6-1 depicts the coefficients of Cronbach's Alpha. These coefficients are discussed based on inferences from inferences Cronbach's Alpha by Nunnally (1978) and George and Mallery (2003)

Table 6-1. Cronbach's alpha coefficients

Questionnaire	Number of Items	Cronbach's Alpha	Reliability Statue (Nunnally 1978)	Reliability Statue George & Mallery (2003)
Entrepreneurial Orientation	9	0.944	Confirmed	Excellent
Corporate Entrepreneurship	15	.940	Confirmed	Excellent
Environmental Factors	12	0.864	Confirmed	Good
Survey Questionnaire	44	0.893	Confirmed	Good

Nunnally (1978) stated that an alpha coefficient higher than 0.7 demonstrates the acceptable reliability of research instruments. As Table 6-1 shows, the coefficients for all parts and the questionnaire as a whole are higher than 0.7. Hence, based on Nunnally (1978), the survey questionnaire and its parts are reliable. George and Mallery (2003) extended the Nunnally (1978) inference and suggested a continuum for assessing reliability based on Cronbach's Alpha. Table 6-2 shows their

reliability continuum.

Table 6-2. *George and Mallery's continuum of Cronbach's Alpha*

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent (High-Stakes testing)
$0.8 \leq \alpha < 0.9$	Good (Low-Stakes testing)
$0.7 \leq \alpha < 0.8$	Acceptable (Surveys)
$0.6 \leq \alpha < 0.7$	Questionable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

Based on this inference, EO and CE are shown to be excellent and the environment factors show good reliability. The Cronbach's Alpha coefficient of 0.893 for the survey questionnaire confirms a good internal consistency.

6.2. Data summary and description

Table 6-3 summarizes the frequencies and other descriptive indexes to present an overall picture of the data.

Table 6-3. *Descriptive analysis*

Firm-level Entrepreneurship		Internationalization		Size ¹	
Type	number	Yes	No	Small	Medium
Non Entrepreneurial	20	8	12	18	2
Forced Entrepreneurial	24	24	0	24	0
Latent Entrepreneurial	26	18	8	23	3
Actual Entrepreneurial	34	31	3	22	12
Total	104	81	23	87	17
Missing	33	31	2	28	4
Total (Include missing)	137	112	25	115	21

To assign the type of firm based on the four-fold entrepreneurial model presented in Chapter 2, the status of EO and CE were determined based on the following statistical scale.

¹ This index had a missing case

Figure 6-1. *Applied scale to determine EO and CE status*

Of the 137 firms that were investigated in this research, about 104 were positioned in the high or low categories of CE and EO, and 33 cases were laid out in Missing interval based on their status of EO or CE.

Regarding internationalization involvement, 112 companies had some international activities, 81 of them which were truly positioned in the four-fold entrepreneurial model and 31 which were settled in the missing interval. Among local companies (about 25), the positioning was slightly better and 23 of them were truly laid out in the model. About 115 companies were categorized as small (less than 50 employees), and 21 companies which had 50 or more employees were categorized as medium enterprises. 87 of the small and 17 of the medium companies are positioned in the four-fold entrepreneurial model.

The descriptive analysis shows that despite the Missing interval in the scale that may throw some cases out of the analysis, the model has an acceptable positioning power. Researchers can reduce the number of missed cases by reducing the error interval (in this study, an error interval of about 5% is assumed).

6.3. Selection of analysis techniques

Selecting a proper statistical technique for analyzing the research data depends on the scale of the measurements and the purpose of the analysis (McCrum-Gardner 2008). Table 6-4 shows the proper methods for testing the research hypotheses. Whenever possible, more than one method, usually by converting the scale of measurement, have been applied to compare the results and present more precise findings.

Table 6-4. The Selection of statistical methods

Hypothesis	Measurements		Scale of measurements		Purpose	Proper technique
	Independent	Dependent	Independent	Dependent		
H1	FLE	II	Nominal	Nominal	Relation	Chi Square
H2	FLE	Int	Nominal Dummy ²	Interval	Compare	ANCOVA DHR
H3	FLE	IP				
H4	FLE	IS				
H5	EO	Int	Interval	Interval	Relation	HR
H6	CE	Int				
H7	Innovativeness, Proactiveness and risk-taking	Int	Interval	Interval	Compare	Preacher (2002)'s Method
H8	Innovation, Venturing and Strategic Renewal					
H2a, b	FLE	Int	Nominal Dummy ²	Interval	Relation (Moderation)	ANCOVA ³ DMMHR
H3a, b	FLE	IP				
H4a, b	FLE	IS				
H5a, b	EO	Int	Interval	Interval	Relation (Moderation)	MMHR
H6a, b	CE	Int				

To handle the influence of control variables in the regression models, the control variables are entered first, then independent and moderator variables, and finally the product terms are inserted. In ANCOVA and Chi Square analysis, the control variables are respectively entered as covariates and different layers to be controlled.

6.4. Fitness of statistical techniques

Besides the appropriateness of the statistical techniques, researchers should examine the fitness of techniques. Fitness refers to the necessary prerequisites that determine the accuracy of the results. Table 6-5 demonstrates the test of fitness and the results of statistical methods that were applied.

To apply the Chi Square, the expected observations in each category were monitored. The results showed that there is no category with zero expected

² Converting measurement scale

³ Converting measurement scale of moderator variable

observation, and about 12.5% of the categories had expected observations less than 5%. Therefore, the necessary conditions of Chi Square⁴ were met.

Table 6-5. Testing the fitness of statistical techniques

Hypothesis	Proper technique	Fitness Test	Status	Solution (If possible)	Final Status
H1	Chi Square	Chi Square assumptions	Confirmed		Confirmed
H2	ANCOVA	Levene's Test	Confirmed		Confirmed
	DMR	VIF	Confirmed		Confirmed
H3	ANCOVA	Levene's Test	Rejected		Rejected
	DMR	VIF	Confirmed		Confirmed
H4	ANCOVA	Levene's Test	Rejected		Rejected
	DMR	VIF	Confirmed		Confirmed
H5	HR	VIF	Confirmed		Confirmed
H6					
H2a, 3a, 4a	ANCOVA	Levene's Test	Confirmed		Confirmed
	DMMR	VIF	Rejected	Centering	Confirmed
H2b, 4b	ANCOVA	Levene's Test	Confirmed		Confirmed
	DMMR	VIF	Rejected	Centering	Confirmed
H3b	ANCOVA	Levene's Test	Rejected		Rejected
	DMMHR	VIF	Rejected	Centering	Confirmed
H4a, 5a	MMHR	VIF	Rejected	Centering	Confirmed
	MMHR	VIF	Rejected	Centering	Confirmed

Homogeneity of variances means the equal variances of categories that the study intends to compare is the most important necessary condition for conducting the ANOVA and ANCOVA models. In fact, researchers can just use the ANOVA and ANCOVA models when the variances of groups that they are supposed to compare are equal. The most popular test for examining the homogeneity of variances is Levene's test (Glass 1966). This popular technique was applied to test the homogeneity of variances before conducting the ANCOVA models.

Considering the notion of multicollinearity is the necessary condition of every regression analysis (Shieh 2010), researchers have used several techniques to examine the multicollinearity of regression models such as condition number, singular value decomposition method, Belsley's condition indices, variance

⁴ The necessary conditions of Chi Square are: 1. Expected observations in all categories should be more than zero, and 2. Less than 20% of categories should have expected observations below 5%.

decomposition method, variance inflation factors (VIF), and Belsley's perturbation analysis (Wißmann et al. 2007). Marquardt (1980) distinguished between essential and non-essential multicollinearity. The former refers to the actual correlation between predictors, while the latter occurs due to scaling and nonzero mean of predictors and can be removed by centering predictor variables (Shieh 2010). The VIF index was employed to examine the multicollinearity of the regression models. The common rule is that a VIF of 10 or more demonstrates the existence of severe multicollinearity in the regression models (Cohen et al. 2003; Kutner et al. 2004).

Because interaction terms usually have high correlation with their individual items in regression models, it is necessary to center predictor variables to remove the multicollinearity (Robinson & Schumacker 2009). If the linear regression includes dummy variables, then the intercept has an important role in interpreting results, while centering predictors is not very meaningful because it affects the intercept and leads to different findings. In such cases, researchers should reduce multicollinearity through selecting the most powerful category as the reference (Wißmann et al. 2007). The most powerful category is a category that has the highest frequency. In this research, the problem of multicollinearity of dummy regression could not be solved via changing the reference category. Therefore, the continuous predictors of the dummy regressions were centered and then the multicollinearity was tested; if the VIF after centering was reduced to less than ten, then it was supposed that the multicollinearity was non-essential and could be ignored.

6.5. Data analysis

In this section, all hypotheses are analyzed using the appropriate fit techniques discussed in the previous sections. Data were analyzed by more than one technique whenever there was more than one appropriate technique for analyzing, and the results were compared to gain a deeper understanding.

Firm-level entrepreneurship and internationalization

Table 6-6 shows the results of Chi Square analysis of FLE and international involvement.

Table 6-6. *Chi Square analysis of FLE and International Involvement*

International involvement	Firm-Level Entrepreneurship				
	NE	FE	LE	AE	Total
Yes	8 (40%)	24 (100%)	18 (69.2%)	31 (91.2%)	81 (77.9%)
No	12 (60%)	0 (0%)	8 (30.8%)	3 (8.8%)	23 (22.1%)
Total	20 (100%)	24 (100%)	26 (100%)	34 (100%)	104 (100%)
Pearson Chi Square		28.098 **			
Phi and Cramer's V test		0.520 **			

* $P < 0.05$ ** $P < 0.01$

The significance of the Chi Square coefficient ($P < 0.01$) demonstrates the meaningful differences between actual and expected observations, and points to the existence of an association between firm-level entrepreneurship and international involvement. The Phi and Cramer's V test illustrates the strength of the relationship. The Phi and Cramer's V coefficient shows an intense and significant ($P < 0.01$) relation between firm-level entrepreneurship and international involvement. By observing each type of entrepreneurial firm and comparing the number of international and local companies in the columns, it can be concluded that the number of FE and AE firms which have international activities is more than the LE firms. The NE firms have the minimum tendency toward internationalization. Entering firm size in the Chi Square as a layer illustrated that the results among different categories of size are the same, and therefore justified that size does not have a significant effect on international involvement. Repeating this analysis for international experience and psychic distance revealed the same results. These findings partially confirm Hypothesis 1, which supposed a higher rate of international involvement for the AE firms than for others.

Table 6-7 summarizes the DMR analysis of Hypotheses 2, 3, and 4. In all regression models, the firm size, international experience of CEOs and psychic distance are entered as the first layer to control their effects on the criteria.

Table 6-7. Regression Analysis of FLE, International Performance, and Speed

		Model 1: Internationalization		Model 2: International Performance		Model 3: Internationalization Speed	
		Control	Predictor	Control	Predictor	Control	Predictor
Firm Size		.007	.052	.152	.201	-.151	-.160
International Experience		.140	.152	.207	.236**	.002	-.009
Familiarity		.349**	.266**	.482**	.407**	.062	-.051
FLE (Dummy Coded)	NE		-3.782**		-.895		-2.931**
	FE		3.177**		2.064**		1.139**
	LE		1.006		.723		.053
	AE		7.629**		1.825		6.081**
R²		.118*	.473**	.226**	.421**	.033	.383**
Adjusted R²		.081*	.427**	.195**	.373**	-.007	.330**
Δ R²		.118*	.355**	.226**	.195**	.033	.350**

* P < 0.05 ** P < 0.01

This table shows that among all control variables, only market familiarity significantly influences internationalization, international performance and internationalization speed. Firm size does not have a significant effect on internationalization and its dimensions, and international experience only significantly influences international performance when entered with the firm-level entrepreneurship.

Firm-level entrepreneurship was converted into the three dummy variables of non-entrepreneur (NE), forced entrepreneur (FE), and latent entrepreneur (LE). The reference category for dummy coding was the actual entrepreneur (AE) because it has the highest frequency. ΔR^2 for all models is high and significant as it demonstrates the significant effect of firm-level entrepreneurship on internationalization, international performance and internationalization speed. To compare each type of firm-level entrepreneurship, their individual coefficient and their differentiation with the reference coefficient are observed. There is no difference between LE and AE in internationalization, international performance and internationalization speed because their coefficients are not significant ($P < 0.05$). Further investigations show that the FE and NE firms respectively have the highest and the lowest degree of internationalization and internationalization speed.

On the whole, entrepreneurial firms show higher and faster internationalization compared to non-entrepreneurial, and among entrepreneurial companies, the FE firm has the highest and fastest internationalization. These results do not confirm the second and fourth hypotheses that supposed the highest and fastest internationalization for the AE firm. The ANCOVA analysis of firm-level entrepreneurship and internationalization also confirmed the different degree of internationalization for each type of firm ($P < 0.01$).

The findings of the international performance declare no difference between the NE, LE, and AE firms. The only significant difference of the international performance relates to the FE. These results show that the highest level of international performance belongs to the forced entrepreneurial firms, and does not confirm the third hypothesis.

EO, CE, and internationalization

Hierarchical regression is applied to analyze the individual effect of EO and CE on the internationalization of firms. Table 6-8 displays the results.

The results of the hierarchical regression for EO demonstrate that EO negatively affects the internationalization of the firms (-0.326 , $P < 0.01$). The R square change shows that about 9.1% of variance of internationalization can be justified by the variance of entrepreneurial orientation. There is no significant association between corporate entrepreneurship and internationalization. These findings rejected the hypotheses regarding the positive association of EO and CE with internationalization.

Table 6-8. Regression Analysis of EO, CE, and Internationalization

	Model 1: EO		Model 2: CE	
	Control	Predictor	Control	Predictor
Firm Size	.058	.116	.058	.026
International Experience	.110	.162	.110	.118
Psychic Distance	.302**	.240**	.302**	.257**
EO		-.326**		
CE				.147
R²	.083*	.174**	.083*	.103
Adjusted R²	.056*	.141**	.056*	.067
Δ R²	.083*	.091**	.083*	0.020

* P < 0.05 ** P < 0.01

The effects of individual dimensions of EO and CE

By using the correlation coefficients and converting them to a Z-score, it will be possible to compare the association of individual dimensions of EO and CE with internationalization. The Fisher r-to-z transformation formula was applied to convert the correlation coefficient to a Z-score.

$$zr = .5 [\log(1 + r) - \log(1 - r)]$$

The following table shows the correlation coefficients and their Z-score values.

Table 6-9. Correlation coefficients and Preacher's Technique

	INVS	PROA	RITA	INVN	VENT	STRW
Correlation coefficient	-.306**	-.344**	-.219**	.023	.180	.309**
Z score Value	-.316	-.359	-.223	0.023	.182	.319
N	104	104	104	104	104	104
(Preacher 2002) Method	Compare correlations		Absolute Z	Compare correlations		Absolute Z
	INVS Vs. PROA		.345	INVN Vs. VENT		1.144
	INVS Vs. RITA		.713	INVN Vs. STRW*		2.107
	PROA Vs. RITA		1.058	VENT Vs. STRW		.962

* P < 0.05 ** P < 0.01

The correlation coefficients demonstrate significant negative associations between each dimension of EO and internationalization. The results of Preacher's (2002) method reveals no differences between the correlation coefficients of

innovativeness, proactiveness, and risk-taking with internationalization. Hence, it can be concluded that all dimensions of EO have similar effect on the internationalization of SMEs and Hypothesis 7, which supposed individual dimensions of EO have different effects on internationalization is rejected.

Among the different aspects of CE, only strategic renewal shows a significant association with internationalization, and other aspects do not depict significant relationships. Further investigation by comparing correlation coefficients discloses different impacts of dimensions of CE on internationalization. Therefore, Hypothesis 8 is confirmed.

Firm-level entrepreneurship and internationalization in dynamic environments

Many researchers have applied the moderated regression models to analyze the effect of factors that may moderate the relationship of independent and dependent variables. In this research, two different statistical models have been used, moderated regressions and ANCOVA, to gain a deeper understanding of the moderated effects of the environmental factors.

Table 6-10 summarizes the moderated regression models for the moderating effect of environment dynamism on the association of firm-level entrepreneurship, internationalization, international performance, and internationalization speed.

Control variables justify about 11.8% of the variance of internationalization ($R^2=.118$, $P < 0.05$) and 22.6% of the variance of international performance ($R^2=.226$, $P < 0.01$), but they do not have a significant influence on internationalization speed. Indeed, only market familiarity shows a significant positive association with internationalization and its dimensions, and the other control variables do not have significant effects.

Table 6-10. Regression Analysis of FLE, Environmental Dynamism and Internationalization

		Model 1: Internationalization			Model 2: International Performance			Model 3: Internationalization Speed		
		Control	Predictor	Product	Control	Predictor	Product	Control	Predictor	Product
Firm Size		.007	.005	.026	.152	.014	.141*	-.151	-.01	-.145
International Experience		.140	.047*	.131	.207	.048**	.204**	.002	0	-.009
Psychic Distance		.349**	.264**	.389**	.482**	.252**	.553**	.062	-.017	-.056
ED			-.247**	.012		-.206**	-.007		-.029	.044
FLE (Dummy Coded)	NE		-4.679**	-1.510**		-1.644*	-.952**		-3.037**	-1.675**
	FE		2.424**	.637**		1.441**	.534**		1.050*	.565*
	LE		1.519	.620*		1.097*	.625**		.113	.150
	AE		12.449**	-.435**		5.924**	-.531**		6.650**	-.126
NE*ED				-.730*			-.922**			-.121
FE*ED				-.669**			-.803**			-.249
LE*ED				-.438			-.421			-.211
R²		.118*	.533**	.605**	.226**	.513**	.617**	.033	.386**	.393
Adjusted R²		.081*	.486**	.545**	.195**	.465**	.560**	-.007	.323**	.302
Δ R²		.118*	.415**	.072**	.226**	.287**	.103**	.033	.353**	.008

* P < 0.05 ** P < 0.01

Environmental dynamism is a significant predictor of internationalization ($\beta=.247$, $P < 0.01$) and international performance ($\beta=.206$, $P < 0.01$). The following equations depict the moderated regression models for internationalization, international performance and internationalization speed in the row.

$$Int = -.435 - 1.51NE + .637FE + .620LE - .730NEED - .699FEED$$

$$IP = -.531 - .925NE + .534FE + .625LE - .922NEED - .803FEED$$

$$IS = -1.675NE + .565FE$$

By expanding these equations for different types of entrepreneurial firms, 12 amounts (three amounts for each type of entrepreneurial firm) can be calculated, as depicted in Table 6-11.

Table 6-11. *The internationalization Degree, Performance, and Speed of NE, FE, LE, and AE*

Firm Level entrepreneurship	Internationalization	International performance	Internationalization speed
Non entrepreneur	-1.945 - .730ED	-.925 - .922ED	-1.675
Forced Entrepreneur	.202 - .699 ED	0.003 - .803ED	.565
Latent Entrepreneur	.185	.094	0
Actual Entrepreneur	-.435	-.531	0

The first and the second columns of the table show that in a stable environment (ED=0), the FE and the NE firms respectively show the highest and the lowest degree of internationalization and international performance. This is because the degree of internationalization and the level of performance of the FE firm are reduced in more dynamic environments. Thus, it can be concluded that in a more dynamic environment, the degree of internationalization and the performance of the FE firm may decrease to a lower level than the LE and the AE firms, which are independent of environmental dynamism. These results declare that in a more dynamic environment, the LE firm may display a higher degree of internationalization and international performance than others. Therefore, the hypotheses that supposed the highest degree of internationalization and international performance for the actual entrepreneurial firms in more dynamic environments are rejected. The third column of Table 6-11 demonstrates that internationalization speed is completely independent from environmental dynamism, and that the FE firm always shows the highest speed of internationalization.

Table 6-12 represents the ANCOVA analysis of the moderating effect of environmental dynamism on the association of firm-level entrepreneurship and internationalization, international performance and internationalization speed. The results of the ANCOVA analysis confirmed the HDMR findings on the main effects, and show the significant effects of environmental dynamism on internationalization ($F=3.345$, $P < 0.05$) and international performance ($F=4.686$, $P < 0.01$). This analysis could not find any significant moderation effect of environmental dynamism on the association of firm-level entrepreneurship and

internationalization and its components. This may be caused by converting the interval scale to a categorical scale that can reduce the accuracy of the data.

Table 6-12. *The ANCOVA Analysis of Moderation Effect of Environment dynamism*

	Model 1: Internationalization		Model 2: International Performance		Model 3: Internationalization Speed	
	Mean Square	F value	Mean Square	F value	Mean Square	F value
Firm Size	2.794	.506	9.919	3.782	2.873	1.202
International Experience	16.762	3.038	18.287	6.973**	1.951	0
Psychic Distance	58.909	10.673**	49.210	18.763**	.006	.003
Firm-Level entrepreneurship	84.730	15.359**	22.116	8.423**	24.799	10.371**
Environmental Dynamism	18.453	3.345*	12.290	4.686**	.220	.882
FLE*ED	8.291	1.503	4.405	1.680	.432	.878

* P < 0.05 ** P < 0.01

EO, CE, and internationalization in dynamic environments

Table 6-13 depicts the analysis of hierarchical moderated regressions for the influence of dynamic environment on the relation of EO and CE with internationalization.

Table 6-13. *Regression Analysis of EO, CE, ED and Internationalization*

	Model 1: EO			Model 2: CE	
	Control	Predictor	Product	Predictor	Product
Firm Size	.058	.074	.069	.003	.004
International Experience	.110	.200*	.197*	.200*	.199*
Psychic Distance	.302**	.283**	.293**	.270**	.273**
EO		-.174	-.154		
CE				.167	.173
ED		-.287**	-.303**	-.377**	-.349**
EO*ED			.059		
CE*ED					-.097
R²	.083*	.233**	.531	.239**	.248
Adjusted R²	.056*	.194**	.189	.200**	.201
Δ R²	.083	.150**	.003	.156**	.009

* P < 0.05 ** P < 0.01

As previously mentioned, variables were entered into the regression models through three distinct steps: first control variable, then main effect, and last product terms were added to the model.

The analysis shows that the environmental dynamism has a significant positive association in EO ($\beta=.287$, $P < 0.01$) and CE ($\beta=.377$, $P < 0.01$). The third and last columns of the table, which illustrate the results of the moderating effect of environmental dynamism on EO and CE, demonstrate non-significant coefficients for product terms of EO and CE with environmental dynamism. These findings prove that the relations of EO and CE with internationalization are independent of environmental dynamism.

Firm-level entrepreneurship and internationalization in hostile environments

Table 6-14. Regression Analysis of FLE, Environment Hostility, and Internationalization

		Model 1: Internationalization			Model 2: International Performance			Model 3: Internationalization Speed		
		Control	Predictor	Product	Control	Predictor	Product	Control	Predictor	Product
Firm Size		.007	.005	.036	.152	.014	.147	-.151	-.010	-.141
International Experience		.140	.041	.122	.207	.042**	.194**	.002	-.001	-.014
Psychic Distance		.349**	.311**	.410**	.482**	.261**	.514**	.062	.009	-.001
EH			-.202**	.017		-.118*	.024		-.064	.045
FLE (Dummy Coded)	NE		-4.930**	- 1.451**		-1.502	-.745*		-3.295**	- 1.749**
	FE		2.963**	1.078**		1.945**	1.057**		1.071**	.743**
	LE		1.306	.583**		.820	.452		.148	.322
	AE		12.248**	-.443**		4.665**	-.536**		7.544**	-.137
NE*EH				-.402			-.436			-.176
FE*EH				-.772**			-.795**			-.479
LE*EH				-.751**			-.405			-.850**
R ²		.118*	.520**	.618**	.226**	.458**	.537**	.033	.398**	.462
Adjusted R ²		.081*	.472**	.560**	.195**	.404**	.469**	-.007	.337**	.380
ΔR^2		.118*	.403**	.098**	.226**	.232**	.079**	.033	.366**	.063

* P < 0.05 ** P < 0.01

Table 6-14 declares the moderation regression models of internationalization, international performance and speed of internationalization for firm-level entrepreneurship and environmental hostility as the predictor and moderator in the row.

At first glance, the table demonstrates the negative influence of environmental hostility on internationalization ($\beta = -.202$, $P < 0.01$) and international performance ($\beta = -.118$, $P < 0.05$). The ANCOVA analysis also confirms the significant association of environmental hostility and internationalization ($F = 2.692$, $P < 0.05$).

By bringing the significant regression coefficients out and putting them in equations, the following regression formulas for internationalization, international performance and internationalization speed are developed.

$$Int = -.443 - 1.451NE + 1.078FE + .583LE - .772FEEH - .751LEE H$$

$$IP = -.536 - .745NE + 1.057FE - .795FEEH$$

$$IS = -1.749NE + .743FE - .850LEE H$$

Table 6-15 summarizes the degree of internationalization, international performance and speed of internationalization in hostile environments.

Table 6-15. The Internationalization Degree, Performance, and Speed of NE, FE, LE, and AE firms

Firm Level entrepreneurship	Internationalization	International performance	Internationalization speed
Non entrepreneur	-1.849	-1.281	-1.749
Forced Entrepreneur	.635-.772EH	.521-.795EH	.743
Latent Entrepreneur	.140-.751EH	-.536	-.850EH
Actual Entrepreneur	-.443	-.536	0

The analysis demonstrates that environmental hostility negatively moderates the internationalization of the FE and LE firms compared to the AE firm. This means that by increasing the hostility of the environment, the internationalization of FE firm ($\beta = -.772$, $P < 0.01$) and the LE firm ($\beta = -.751$, $P < 0.01$) are reduced by a higher rate than the AE firm.

These findings show that in a hostile environment the degree of internationalization of the FE and the LE firms may decrease less than the AE firm, and because the AE

firm always has a higher degree of internationalization than the NE firm, it can be concluded that the AE firm will show a higher degree of internationalization than others in a hostile environment.

The second column of Table 6-15 repeats this conclusion for international performance with a minor differentiation. This column shows that the NE firm always shows a lower international performance than the others, and there are no differences between the degree of internationalization of the LE and AE firms. Further details reveal the negative effect of environmental hostility on international performance of the FE firm ($\beta = -.795$, $P < 0.01$) compared to the AE firm. In summary, when the hostility of the environment increases, the international performance of the FE firm decreases, and may go lower than the AE firm. Therefore, in a hostile environment, the AE and the LE firms show the highest level of international performance.

Regarding the speed of internationalization, the FE firm clearly shows the highest speed, and the speed is independent of environmental hostility. Hence, the findings prove that the FE firm shows the highest speed of internationalization in both hostile and stable environments.

EO, CE, and internationalization in hostile environments

Hierarchical regression analysis was applied to investigate the moderating effect of environmental hostility on the relations of EO and CE with internationalization. The regression coefficients of predictors and the product terms with moderator are shown in Table 6-16.

The findings show that environmental hostility does not influence internationalization of the firms (there is no significant coefficient for environmental hostility in the regression models). In summary, there is only a significant change in R square (9.9%, $P < 0.01$) for the model that includes EO and EH as the predictors, and it excludes the product terms (the second column in Table 6-16).

Table 6-16. *Regression Analysis of EO, CE, EH, and Internationalization*

	Control	Model 1: EO		Model 2: CE	
		Predictor	Product	Predictor	Product
Firm Size	.058	.123	.119	.024	.022
International Experience	.110	.157	.164	.121	.122
Psychic Distance	.302**	.196	.175	.268**	.274**
EO		-.359**	-.379**		
CE				.154	.143
EH		.150	.133	-.036	-.018
EO*EH			-.165		
CE*EH					-.070
R ²	.083*	.183**	.209	.104	.108
Adjusted R ²	.056*	.141**	.160	.058	.053
Δ R ²	.083	.099**	.027	.021	.004

* P < 0.05 ** P < 0.01

It seems that the significant change of R square returns to EO, which demonstrates a meaningful negative association with internationalization ($\beta = -.359$, $P < 0.01$). All products terms are non-significant that declare no moderation effect of environmental hostility on the relationship between EO and CE with internationalization.

15. Discussion and conclusions

This chapter discusses the findings, summarizes them and presents practical tips for future research. The main findings of the study presented in the preceding chapter are summarized and compared with former empirical studies. Then, the main conclusions of the study are discussed. Finally, some tips are presented based on the findings and recommendations of earlier researchers.

15.1. Discussion

As mentioned before, there are a number of measurements for determining the degree of entrepreneurial activities at the firm-level, such as entrepreneurial orientation (Covin and Slevin 1989; Lumpkin and Dess 1996; Miller 1983), corporate entrepreneurship (Guth & Ginsberg 1990; Zahra 1991; Zahra 1993b), and entrepreneurial management (Stevenson & Jarillo 1990; Brown et al. 2001). There is no consensus regarding the best measurement, however, and different studies apply to different measurements. A number of researchers have recommended incorporating the widely-accepted measurements of firm-level entrepreneurship in a more comprehensive model because they complement each other (Antoncic 2007; Kreiser & Davis 2009). In fact, each type of these measurements focus on one dimension of firm-level entrepreneurship, and none of them present the whole picture of the level of entrepreneurial activities in a given company.

By incorporating EO and CE, a four-fold model was presented that classified firms into the four distinctive categories of NE, FE, LE, and AE firms. To examine the differentiation power of the model and its match with the reality of the firms in the research area, multi-case study research was conducted, and the potential of the model to classify the companies based on their degree of entrepreneurial orientation and activity was confirmed.

The analysis revealed that the NE firm was started to support the family, and its major vision is to remain in the business as long as it can. It followed an interactive competitive strategy, avoided making risky decisions, did not apply innovation and modern technologies, stuck to the standard procedures and processes and had a low tendency to renew organizational procedures and structure. These characteristics have been strongly confirmed by previous entrepreneurship studies, which focused

on distinctive features of entrepreneurs versus non-entrepreneurs. For example, Glueck (1980) pointed to the family income, while Vesper (1990) mentioned limited growth as characteristics of non-entrepreneurial firms, which means they focused on survival as the main goal and the vision of their companies. Schumpeter (1934) introduced innovation as the most important differentiation between entrepreneurs and non-entrepreneurs. This claim was later proved by other researchers such as Vesper (1990) and Carland et al. (1984). Risk-taking (McClelland 1961; Palmar 1971; Welsh & White 1981) and strategic renewal (Guth & Ginsberg 1990; Zahra 1991; Zahra 1993b) have also been mentioned as key features of entrepreneurial firms.

Forced Entrepreneurs (Tervo & Ritsilä 2000; Orhan & Scott 2001) or necessity entrepreneurs (Bosma & Harding 2006; K. D. Hughes 2006) are those who are forced by push factors. The push factors can be defined as circumstances wherein individuals are forced to run a business because of inappropriate employment conditions (Tervo & Ritsilä 2000). These people usually are compelled to start a business because all other alternatives for work are absent or unsatisfactory (Bosma & Harding 2006). The forced entrepreneurial firms in this study were companies that pushed to have entrepreneurial actions while they did not have the desire to perform those actions. Therefore, similar to individual forced entrepreneurs, this kind of firm was pushed to have entrepreneurial actions but, in contrast to start-up entrepreneurs, was influenced by different types of push factors. While individual forced entrepreneurs are affected by unemployment, job loss, and lack of work opportunities (Hughes 2006), forced entrepreneurial firms were pushed by external factors such as binding contracts, low bargaining power, powerful buyers or suppliers, social forces, governmental rules and so on.

There are two different counterparts for latent entrepreneurial firms in start-up entrepreneurship studies: the latent and nascent entrepreneur. While the former points to the people who prefer to be self-employed (Grilo & Irigoyen 2006), the latter goes a step further and refers to individuals who actually try to start their own businesses (Grilo & Thurik 2005). This concept is mainly applied in the early stage of opportunity discovery (Brixy et al. 2012). The latent entrepreneurial firm in the

study was a new company in the primary steps of showing entrepreneurial actions, and from this perspective it was similar to individual latent (nascent) entrepreneurs. If a latent entrepreneur finds an open opportunity, a new business will be started up (Gries & Naudé 2011), while if a latent entrepreneurial firm grasps an opportunity, a new venture will be born. The LE firm tries to compete with companies who cannot threaten its survival, and mainly focuses on growth as the main strategy of the company. It accepts a high level of risk to grasp the opportunities that bring modern technologies to the company and may lead to new innovations. It sticks to the existing organizational structure and procedures, and ignores strategic renewal as much as possible.

The actual entrepreneur is a person who currently has his or her own business, while the latent entrepreneur wants to be an entrepreneur (Freytag & Thurik 2006). In comparison to forced entrepreneurs, latent and actual entrepreneurs relate to pulling factors (Fayolle 2011), whereas forced entrepreneurs are forced by push factors. The actual entrepreneurial firm is an enterprise which has a high degree of EO and CE at the same time. This kind of company is the ideal type, which tries to be the best in the industry and actively challenges competitors to remind them of its dominance. Because of previous experiences, it takes moderated and well-balance risks, and concurrently applies modern technologies, innovations and adaptable organizational structures and procedures to get the best advantage.

Each kind of investigating firm identified by the four-fold model of entrepreneurial firms perceived different factors as the obstacles of entrepreneurial actions. The LE firm mentioned unjustifiable ideas and lack of insurance, the FE firm referred to external constraints imposed by the supplier, the LE firm pointed out the lack of financial resources, and the AE firm noted the lack of innovative ideas. These findings are compatible with former studies, which concentrated on the obstacles of entrepreneurship among entrepreneurs and entrepreneurial firms (Grilo & Irigoyen 2006; B. George & Marino 2011). For instance, Grilo and Thurik (2005) found that while a number of empirical researchers have mentioned the lack of financial resources as an impediment for starting a new business, this obstacle is positively related to latent entrepreneurs and has no effect on actual entrepreneurs.

Previous studies that investigated the relationship between entrepreneurship and internationalization employed EO to measure entrepreneurial behaviors and actions at the firm level. Those studies revealed a positive influence of EO on internationalization preparation (Knight 2001), international performance (Jantunen et al. 2005; Mostafa et al. 2005; Zahra & Garvis 2000; Balabanis & Katsikea 2003), internationalization (Nummela et al. 2004; Knight & Cavusgil 2004b; Clercq et al. 2008), and speed of internationalization (Zhou et al. 2007; Lan & Wu 2010). In this study, a new categorical model was applied to classify the entrepreneurial firms, and the findings revealed the highest degree of international involvement, international performance, internationalization and internationalization speed for the forced entrepreneurial firms.

The latent entrepreneurial and actual entrepreneurial firms demonstrated a lower degree of internationalization, international performance and speed of internationalization than forced entrepreneurial firms, and a higher degree of the same than non-entrepreneurial firms. These findings show that the entrepreneurial firms depict a higher degree of internationalization in all dimensions and confirm the former empirical studies. However, the more interesting point largely ignored by previous studies is the differences among the entrepreneurial companies themselves. As the findings indicated, the different types of entrepreneurial firms showed different degrees of internationalization, international involvement, international performance, and speed of internationalization. The best explanation for the high degree of internationalization of forced entrepreneurial firms is the superior supplier and the nature of their products. The superior supplier forced the FE firms to produce high-quality products and helped them to find proper foreign customers. Actually, the supplier was the shared owner of the FE firms' products, and actively employed the business and social networks to find the best foreign markets. The cultivated shrimp also is an exported product which is mainly produced for foreign markets.

In contrast to the expectation, this study shows that there is no significant association between the corporate entrepreneurship activities of venturing, innovation and strategic renewal and the internationalization of SMEs. Further

analysis revealed the negative role of entrepreneurial orientation, which is completely opposite to the findings of other empirical studies. These results demonstrate that the internationalization of SMEs in the investigated area is influenced by other factors, and that entrepreneurial orientation and actions cannot justify it alone. Factors such as networking, having a powerful international supplier who helps the company expand abroad, governmental support and so on may have a bigger effect than entrepreneurial orientations and actions. There are a number of empirical studies that could not find a significant direct relationship between EO and corporate performance (Covin et al. 1994; G. George et al. 2001; Hart 1992; Matsuno et al. 2002; Smart & Conant 1994). In fact, EO is the necessary and not sufficient condition for superior performance (Zahra & Covin 1995; Parkman et al. 2012), and under specific conditions may show a negative association with corporate performance (Hart 1992). Although the findings of this study are contrasted by the majority of former empirical studies, they confirm the conclusion by Hart (1992). The results also show that, under specific conditions, governmental associations and powerful suppliers help SMEs to sell their products in international markets, and that a desire to be proactive, innovative and take risks may reduce the success of internationalization.

This research showed that all individual dimensions of EO affect internationalization in the same manner. These findings are in contrast with the notion of the formative nature of EO. Lumpkin and Dess (1996) claimed that EO is a formative construct that simply is calculated by aggregating its dimensions. They stated that a company may show a high degree of innovativeness and proactiveness but a low degree of risk tendency. They also claimed that different dimensions of EO may have different effects on corporate performance. Contrary to this notion, Covin and Slevin (1989; 1991) assumed a reflective nature for EO. The reflective nature refers to the idea that each dimension reflects all features of the construct, and that the whole construct is more than a simple addition of all dimensions. This notion was confirmed by George and Marino (2011), who deeply discuss the epistemology of entrepreneurial orientation. The results for CE revealed that only strategic renewal has a positive association with internationalization. Therefore, as

expected the different dimensions of CE depict different relations with internationalization. These findings are compatible with the notion that corporate entrepreneurship is formed by different kinds of entrepreneurial activities that may act independently (Guth & Ginsberg 1990; Zahra 1991).

When the dynamism of the environment increases, the degree of internationalization of forced entrepreneurial firms may decrease to lower than the degree of internationalization of latent entrepreneurial firms. Therefore, and in accordance with previous studies, these findings confirm that environmental dynamism moderates the relation of firm-level entrepreneurship and internationalization (Wiklund & Shepherd 2005; Yeoh & Jeong 1995; Dimitratos et al. 2004). Environmental dynamism does not have any significant effect on the internationalization of AE and LE firms, but it showed a negative moderating effect on the associations of FE and NE firms with internationalization. Actually, environmental dynamism just decreases the degree of internationalization of companies which have a low degree of EO, and does not affect the other types of inquiring firms. The analysis of the dimensions of internationalization includes international performance and internationalization speed, demonstrates that environmental dynamism only influences international performance, and does not show any significant effect on the speed of internationalization.

In contrast with other studies that have found a significant moderating effect of environmental dynamism on the relationships of EO (Covin & Slevin 1989; Miller 1983; Wiklund & Shepherd 2005) and CE (Zahra 1993b) with corporate performance and internationalization (Yeoh & Jeong 1995; Dimitratos et al. 2004), this analysis depicts no moderating effect of environmental dynamism on the relationships of EO and CE with internationalization. The results of the moderating effect of environmental hostility are the same as for environmental dynamism. Therefore, the relations of EO and CE with internationalization are independent from environmental factors. These findings may be justified by describing the specific conditions of SMEs in Iran when they want to sell their products in foreign markets. The Iranian economy is formed by different governmental associations, and it is highly influenced by governmental plans and strategies to support and

advise SMEs. Internationalization is a very sensitive discussion in this economy, and companies are mainly forced to adapt their internationalization strategies with governmental plans and move in specific paths dictated to them. Therefore, perceived environmental factors have the smallest effect.

Clearly, the findings are essentially different when the companies are categorized based on the four-fold model. As mentioned before, environmental dynamism had a moderating effect on the internationalization of non-entrepreneurial and forced entrepreneurial firms, while latent entrepreneurial and actual entrepreneurial firms were independent from the environmental factors. This happens because the non-entrepreneurial and forced entrepreneurial firms have less control over their internationalization, and they fundamentally rely on governmental associations and powerful suppliers for their internationalization. Hence, the perceived turbulence of the environment mainly caused by those governmental associations influenced them more than the latent and actual entrepreneurial firms, which are partially independent. Regarding environmental hostility, the conditions are more complicated. Environmental hostility moderates the internationalization of latent entrepreneurial firms through their speed of internationalization. This means that when the hostility increases, the speed of internationalization of latent entrepreneurial firms decreases. This can be explained by their risk taking and lack of financial resources. The latent entrepreneurial firms take high risks to access modern technologies and new markets. Because they have a lack of financial resources and are in a hostile environment, the gambling risks can lead them to lose their limited financial resources then they cannot go abroad as soon as they want.

15.2.Conclusions

In this research, two popular measurements (entrepreneurial orientation and corporate entrepreneurship) of firm-level entrepreneurship were incorporated into a four-fold entrepreneurial model which classified the firms into the four different categories of NE, FE, LE and AE firms. The differentiation power of the model was examined by conducting a multi-case study that was called “confirmation phase”. The confirmation phase relied on two different steps. In the first step, some

key factors that were presented as the differentiation characteristics of entrepreneurial versus non-entrepreneurial firms were identified by reviewing the proper literature. In the second step, by selecting a company as representative of each category and performing in-depth interviews, the conditions of each company in the selected characteristics were evaluated.

Seven characteristics were initially identified as shown in Table 5-1. Finally, the interviews revealed another differentiation factor, which was added to the table as the eighth characteristic. The results demonstrated that the companies have different conditions in all characteristics except perceived environment. Therefore, it is concluded that the model is matched with the reality of the firms, because each company is a unique enterprise with unique characteristics depicting differentiation.

The findings demonstrated that forced entrepreneurial firms have a higher degree of internationalization, international involvement, international performance, and internationalization speed in stable environments. When the dynamism or hostility of the environment increase, the internationalization and international performance decrease, and in a very dynamic or hostile environment, actual and latent entrepreneurial firms may demonstrate a higher degree of internationalization and international performance than forced entrepreneurial companies. The internationalization speed is independent of the environmental turbulences, and forced entrepreneurial firms always show a faster internationalization process than others.

There was no significant relationship between corporate entrepreneurship and the internationalization of SMEs. Surprisingly and in contrast with a number of former empirical studies, a negative association was found between entrepreneurial orientation and internationalization. Environmental dynamism and hostility did not moderate the relationships between entrepreneurial orientation and internationalization. The independence of the negative association of entrepreneurial orientation and internationalization from environment can be justified by describing the specific conditions of the investigating firms. Most

SMEs in Iran are supported or to some extent controlled by powerful governmental or semiprivate associations, or companies that partially or completely forced them to follow special strategies. The presence of these governmental associations or semiprivate suppliers is very influential in determining internationalization strategies, foreign target markets and so on. When these SMEs produce special products that are important for the whole economy, such as in this case shrimp and seafood, governmental support and advice are increased significantly. Therefore, when companies rely more on their entrepreneurial orientation, and apply proactive and innovative ideas and strategies that bear some risks on the company and reject the governmental support and advice, it may lead to a decrease in the degree of internationalization.

The analysis of individual dimensions of entrepreneurial orientation on the internationalization of SMEs revealed that there are no differences between the effects of those dimensions on the direction and intensity of the internationalization. This finding may confirm the notion which claims that entrepreneurial orientation is a reflective construct, and means that each dimension reflects the features of the whole construct. This analysis was repeated for the dimensions of corporate entrepreneurship and displayed different results. Among all the dimensions of corporate entrepreneurship, only strategic renewal demonstrated a positive relation, and other dimensions did not depict any significant association with internationalization. These findings are in accordance with the notion that the dimensions of corporate entrepreneurship are in fact the different kinds of corporate entrepreneurship activities that can exist independent of each other.

In whole, the study showed that the four-fold entrepreneurial model, which has integrated entrepreneurial orientation and corporate entrepreneurship in a unique manner, and which was confirmed by multi-case study research, presents a better explanation for the internationalization of SMEs compared to existing measurements like EO and CE. As mentioned before, the research only showed a negative relationship between entrepreneurial orientation and internationalization that was independent of environmental factors, and did not display any significant

relationship between corporate entrepreneurship and internationalization. But when the integrative model was applied as the instrument to determine the entrepreneurial position of the companies, significant differences were revealed among entrepreneurial and non-entrepreneurial firms which can be influenced by environmental turbulences. Using the model leads to a better understanding and deeper justification for the influence of entrepreneurial conditions and characteristics on the internationalization of SMEs, and can be used as the instrument to design more effective plans for the internationalization of SMEs.

15.3.Future research

Former studies stated that entrepreneurial preferences or actions may evolve over time (Hinz & Jungbauer-Gans 1999), and sometimes a forced entrepreneur may convert to a latent or actual one (Kautonen & Palmroos 2009). This inference demonstrates time as a major component that is ignored in this study. Future researchers can explore the dynamic nature of FLE over time, and design the path of entrepreneurial firms toward entrepreneurship by conducting longitudinal studies.

Researchers stated that the interactions among the boards of directors, absorptive capacity (Zahra et al. 2009), business communication, formal controls, environmental scanning, and organizational support (Antoncic & Hisrich 2001) can influence the level of CE. Hornsby et al. (2002) listed rewards, management support, resources (including time), organizational structure, and risk-taking as the enablers of entrepreneurship in organizations. Therefore, there is a need to explore these factors and enablers among different types of entrepreneurial and non-entrepreneurial firms .

In the process of entrepreneurship, discovery and exploitation are different stages that may be affected by different factors (Davidsson & Honig 2003). There is an opportunity to study the influential factors of discoveries and explorations among actual, latent, forced and non-entrepreneurial firms.

Preceding studies claimed that interactions of networks and firm-level entrepreneurship can present a deeper understanding of the internationalization of

SMEs (Al-Laham 2008; Coviello & Munro 1995; Han 2007; Kiss & Danis 2010; D. D. Sharma & Blomstermo 2003; Xie & Amine 2009). Thus, future studies can apply the four-fold model of entrepreneurial firms along with the networking perspective to design a deeper and more comprehensive understanding of the internationalization of SMEs.

15.4.References

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