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CORPORATE ENTREPRENEURSHIP ACTIVITIES IN THE SAUDI CONTEXT

DOCTORAL THESIS

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Abstract

Abstract

Scholars agree that corporate entrepreneurship plays a vital role in organizational and economic performance since it encourages organizations to identify opportunities, plan strategies and gain a competitive edge. Therefore, corporate entrepreneurship draws the attention of both managers and researchers to investigate its nature.

The main objective of this thesis is to analyse corporate entrepreneurship in the context of an emerging economy using human capital, dynamic capabilities and institutional economics as theoretical frameworks. The methodology used in this study is mainly quantitative and based on two sources of data. This thesis explores a promising emerging economy, namely, Saudi Arabia. On the one hand, the Global Entrepreneurship Monitor (GEM) for the years 2016, 2017 and 2018 was utilized as a secondary data source. On the other hand, an online survey that was conducted in 2020 was used as the primary data source. This study applies three analysis techniques, namely logistic regression, path analysis and multiple linear regression.

The main findings are: first, testing and quantifying the direct and moderation effects of formal and informal institutions on corporate entrepreneurship activities in Saudi Arabia; second, the results validate and compare the cross effects of work atmosphere factors on different forms of corporate entrepreneurship; third, the analyses establish the direct and mediating effects of different forms of corporate entrepreneurship on organizational growth.

Finally, this study has theoretical and practical implications. First, it provides empirical evidence relevant to emerging economies' corporate entrepreneurship behaviour using primary and secondary data. Second, it analyses corporate entrepreneurship in the context of an emerging economy using a triangular approach to understand how corporate entrepreneurship behaves in emerging economies. Therefore, it enhances corporate entrepreneurship's vision and confirms that the context is more relevant than what is discussed in the literature. From a practical perspective, policymakers and top managers can benefit from the study by understanding how corporate entrepreneurship and its forms behave, which helps in drawing up policies and strategies more precisely. Also, middle managers and team members can utilize this study to understand how corporate entrepreneurship can be encouraged with a view to implementing plans and reaching targets that have been set by upper management teams.

Keyword: corporate entrepreneurship, entrepreneurial employee activity, intrapreneurship, human capital, dynamic capabilities, institutional economics, emerging economies, Saudi Arabia

Chapter 1

1. MAIN INTRODUCTION

1.1. Problem statement and research objectives

Research related to corporate entrepreneurship has been growing for over four decades (Glinyanova et al., 2021, Schollhammer, 1982). Scholars have defined many terms related to corporate entrepreneurship to describe this phenomenon, such as intrapreneurship (Duncan et al., 1988), corporate entrepreneurship (Guth & Ginsberg, 1990), corporate venturing (Vesper, 1990) and internal corporate entrepreneurship (Schollhammer, 1982). A widely accepted definition of corporate entrepreneurship is “entrepreneurship within an existing organization” (Antoncic & Hisrich, 2001, p. 496). Scholars agree that corporate entrepreneurship is one of the keys to enhancing firms’ regional and economic performance (Gupta et al., 2004). Due to this importance, various researchers have studied what factors enable corporate entrepreneurship in organizations (Adachi & Hisada, 2017; Judge & Zapata, 2015; Martiarena, 2013; Parker, 2011; Yela Aránega et al., 2020). In addition, scholars have studied the impact that corporate entrepreneurship has on organizations and agreed that it has a positive effect on organizational performance (Antoncic & Hisrich, 2001; Lages et al., 2017; Ribeiro Soriano et al., 2012). Also, scholars have defined many forms of corporate entrepreneurship that share similar goals, but each has fundamental differences, such as strategic renewal (Kearney & Morris, 2015), strategic entrepreneurship (Hitt, Ireland, et al., 2001) and internal corporate venturing (McGrath et al., 1994).

Many approaches have been applied to explain the antecedents and consequences of corporate entrepreneurship. To be able to understand corporate entrepreneurship behaviours in emerging economies, three approaches are utilized in this study. This thesis seeks to investigate corporate entrepreneurship at three levels: individual level, organizational level and environmental level. Therefore, the approaches used in thesis to investigate corporate entrepreneurship are: human capital (Dess et al., 2003), dynamic capabilities (Eisenhardt & Martin, 2000) and institutional economics (North, 1990). Human capital is the knowledge and skills that an individual holds, which can be developed through education and training (Becker, 1995). Dynamic capability is the ability of organizations to adapt to current circumstances by changing their routines and using current resources or acquiring new resources in a manner that is considered appropriate by the organizations’ leaders (Zahra et al., 2006). Institutional economics was introduced by North (1990), who divided institutions into two main categories: formal and informal. Formal

institutions are those institutions that hold a formal presence, such as legal terms and policy and procedures. Informal institutions are those that are driven by societies, such as values, norms and unwritten roles (North, 1990).

As mentioned before, the emerging body of literature on corporate entrepreneurship has been growing for over four decades (Glinyanova et al., 2021). Yet, this phenomenon is in need of future studies being developed (Jong et al., 2015, Neessen et al., 2019, Urbano & Turro, 2013). Most studies related to corporate entrepreneurship have been conducted in Western countries (Hughes & Mustafa, 2017; Turro et al., 2014). Nevertheless, research suggests that context plays a vital role in corporate entrepreneurship activities. Scholars expect to have different results when conducting research related to corporate entrepreneurship in emerging economies (Bruton et al., 2010; Yiu & Lau, 2008), yet there is no clear evidence that those suggestions can be applied. For example, Martiarena (2013) stated that human capital is vital to corporate entrepreneurship, yet the environmental factor is still unexplored. Also, scholars are calling for research related to corporate entrepreneurship in emerging contexts (Hornsby et al., 2013; Hoskisson et al., 2000; Hughes & Mustafa, 2017). Hence, current literature rarely explains the relationship between contexts and intrapreneurial behaviours in emerging economies. Emerging economies tend to practice corporate entrepreneurship with resource constraints, cultural norms and unpredictable market conditions that cause significant challenges for organizational survival and growth. These conditions make it more important for organizations to activate and encourage intrapreneurial behaviour to sustain and expand (Kuratko, Covin, et al., 2014). Therefore, it is vital to growing the research related to corporate entrepreneurship in emerging economies to better understand this phenomenon. Thus, the main objective of this thesis is to analyse corporate entrepreneurship in an emerging economy using a triangular approach, human capital, dynamic capabilities and institutional economics. This thesis focuses on a promising emerging economy globally, namely Saudi Arabia (Abu Bakar et al., 2017).

Saudi Arabian per capita income was expected to rise from 22,000 US dollars in 2012 to 33,500 US dollars in 2020 (Abu Bakar et al., 2017). Most of the total revenue of the country is generated from oil production (Alkhathlan, 2013). However, given the fact that oil prices have decreased in the last few years, the government announced in 2016 a program called “Vision 2030”. This programme has three main themes. One of those themes is a “diversified economy”. The aim of this theme is to foster start-ups and scalable organizations to reach a level where they contribute to the whole economy significantly (Even & Guzansky, 2016).

Therefore, organizations in this context are experiencing a dramatic change in this period that would be interesting to explore under the corporate entrepreneurship shadow.

Overall, as mentioned in the abstract, the main objective of this thesis is to analyse corporate entrepreneurship in an emerging economy using human capital, dynamic capabilities and institutional economics as theoretical frameworks. To achieve this objective, four specific objectives were constructed (see Figure 1.1), which are listed below:

- to review the literature about corporate entrepreneurship that used human capital, dynamic capabilities and institutional economics as theoretical frameworks (Chapter 2)
- to analyse the direct and moderating effects of the determinants of entrepreneurial employee activity (Chapter 3)
- to analyse how different factors of the work atmosphere affect different forms of corporate entrepreneurship (Chapter 4)
- to explore the mediating effects that forms of corporate entrepreneurship have among each other (Chapter 5)

This research mainly uses a quantitative approach. Data used in this thesis comes from two resources. One of those resources was the Global Entrepreneurship Monitor (GEM) for the years 2016, 2017 and 2018, which is used in Chapter 3. Also, a survey was developed in the year 2020 to gather data from Saudi Arabia, which is used in Chapters 4 and 5. Related to this, this research uses three analysis techniques that fit the analysis objectives. Those techniques are logistic regression, multiple linear regression and path analysis.

1.2. Research contributions

In this section, an overview of the research contribution is presented. This research makes multiple theoretical and practical contributions. In the next few paragraphs, contributions to each specific objective are outlined. The first specific objective of this thesis is to explore the work performed in the field of corporate entrepreneurship that used human capital, dynamic capabilities and/or institutional economics. Literature reviews and in-depth research are vital for developing research ideas and a research agenda (Bland et al., 1995). Therefore, this research starts with a systematic literature review of previous works that used one or more of the three approaches utilized in this research. Also, very few systematic literature reviews in

the field of corporate entrepreneurship have been published recently. Therefore, the systematic literature review (Chapter 2) would help scholars to obtain an overall view of previous research in the field of corporate entrepreneurship that has been published in the last two decades.

The second specific objective is to analyse the direct and moderating effects of entrepreneurial employee activity determinants. Although previous research has studied antecedents of corporate entrepreneurship (Chang et al., 2011, 2021; Urbano & Turro, 2013), research lacks studies that investigate whether those antecedents have effects on each other. Related to this, this thesis provides a more precise understanding of how determinants of corporate entrepreneurship behave. Also, in Chapter 3, the investigation was conducted in the context of Saudi Arabia, which, as mentioned above, is an emerging economy that is characterized as one of the promising growing economies in the world (Ahmad et al., 2018). Conducting the investigation in non-Western countries where most research is done (Hughes & Mustafa, 2017), showed that context is one of the main factors that shape corporate entrepreneurship activities in regions. Therefore, Chapter 3 contributes by demonstrating that the context may be more relevant to what has been discussed in the literature.

After analysing corporate entrepreneurship's external and internal antecedents, the research looks in depth at how internal factors affect different forms of corporate entrepreneurship in Chapter 4. Hence, the third specific objective is to analyse how different factors of the work atmosphere affect different forms of corporate entrepreneurship. This chapter makes two main contributions. The first is to compare the effects that work atmosphere factors have on different forms of corporate entrepreneurship, unlike previous research where the effects of work atmosphere factors on a single corporate entrepreneurship form were investigated (Begley et al., 2005; Hitt et al., 2002; Huang, 2001; Ireland et al., 2003; Kuratko et al., 2009). Also, policymakers, managers and team leaders can benefit from this study in enhancing corporate entrepreneurship activities by focusing on work atmosphere factors that enhance the corporate entrepreneurship form they are applying.

After investigating the cross effect of internal factors on different forms of corporate entrepreneurship, this research investigates whether forms of corporate entrepreneurship have an interrelated relationship that affects organizational growth. Consequently, the fourth specific objective is to explore the mediating effects of corporate entrepreneurship on each other. Primarily, Chapter 5 improves the vision of corporate entrepreneurship by providing evidence

that strategic entrepreneurship, which is a form of corporate entrepreneurship, has a mediation role between the relationships of internal corporate venturing and strategic renewal on the one hand and organizational growth on the other. Also, this chapter answers the call of research to use an integrated overview including multiple forms of corporate entrepreneurship as suggested by previous research (Neessen et al., 2019).

1.3. Structure of the research

This section explains in more detail the structure of the thesis. This thesis is divided into six chapters. The first and last chapters are the main introduction and the general conclusion. In between, each chapter has a specific objective (see Figure 1.1).

After the introduction chapter, the thesis starts with a systematic literature review (Chapter 2). The literature review reveals gaps that the thesis fills in Chapters 3, 4 and 5. Chapter 3 focuses on the direct and moderating effect of human capital and institutional economics on CE activities. Chapter 4 focuses on how the work atmosphere affects different forms of CE (strategic entrepreneurship and internal corporate venturing). In Chapter 5, the focus turns to how forms of CE affect organizational growth directly and indirectly.

Chapter 2: Literature review

Chapter 2 provides a systematic literature review focusing on published work related to corporate entrepreneurship using the following approaches: human capital, dynamic capabilities and institutional economics. The main objective is to establish solid ground on which to build the thesis and a future research agenda. I conducted a systematic literature review by reviewing 123 articles and choosing 51 relevant ones to analyse. I used the Social Science Citation Index (SSCI) through the Web of Science service in this process. This chapter provides an overview of articles, main journals, the number of articles published by years and the main analysis techniques. In this regard, I found that CE literature is developing. However, gaps in the literature has been identified and some will be developed in this thesis.

Chapter 3: Direct and moderating determinants of entrepreneurial employee activity: the case of Saudi Arabia

Chapter 3 investigates the direct effect of human capital and institutional economics on CE activities in Saudi Arabia. In addition, it analyses the moderating effect that institutional

economics has on the relationship between human capital and CE activities. Human capital is represented by skill and education and institutional economics by procedures and social legitimacy. The data I use in this chapter was obtained from Global Entrepreneurship Monitor (GEM). A total of 1,499 responses were analysed. Results, a discussion and a future agenda are provided in Chapter 3.

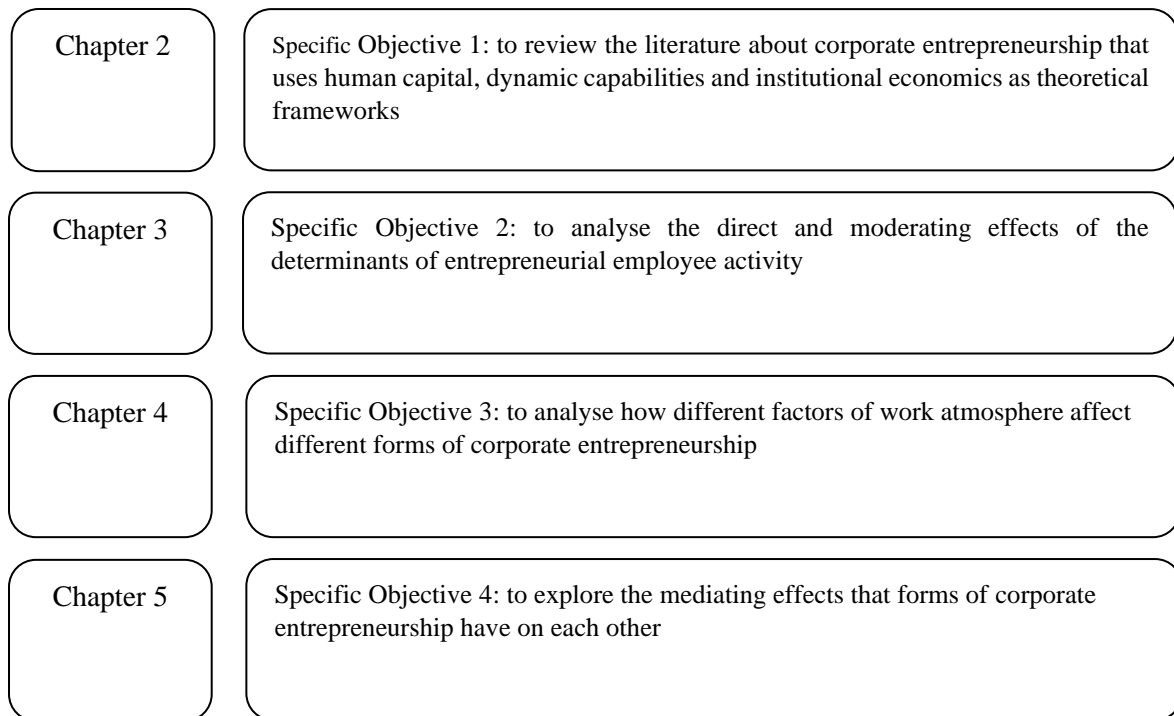
Chapter 4: The effect of work atmosphere on two forms of corporate entrepreneurship: internal corporate venturing and strategic entrepreneurship

Chapter 4 demonstrates how work atmosphere factors have a different effect on different forms of CE. In this chapter, I use two forms of CE, namely strategic entrepreneurship (SE) and internal corporate venturing (ICV). I test the cross effect of each work atmosphere factor (access to resources, management support, procedural steps and colleagues' support) on both forms of CE. I collected my data using an online survey and had 313 usable responses. I use multiple linear regression (MLR) as an analysis technique in this chapter and find that work atmosphere has different effects on different forms of CS.

Chapter 5: Which different forms of corporate entrepreneurship affect organizational growth? Evidence from Saudi Arabia

After analysing the effects of work atmosphere factors on different forms of CE, I conduct a study to analyse which forms of CE affect organizational growth (OG) in Chapter 5. Based on the literature review, I choose three CE forms in my study, i.e. strategic entrepreneurship (SE), internal corporate venturing (ICV) and strategic renewal (SR). The aim of this chapter is to explore the mediating effects that forms of CE have on each other and organization growth. I use the same survey that I use in Chapter 4. I analyse 313 responses using MLR as an analysis technique and find that SR fully mediates the relationship between ICV and OG and partially mediates the relationship between SE and OG.

Figure 1.1: The Four Specific Objectives of the Thesis



Chapter 2

2. CORPORATE ENTREPRENEURSHIP LITERATURE IN LIGHT OF HUMAN CAPITAL, DYNAMIC CAPABILITIES AND INSTITUTIONAL ECONOMICS

2.1. Introduction

The concept of intrapreneurship has been developing over the last four decades (Peterson & Berger, 1971). Terms such as “intrapreneurship” (Duncan et al., 1988), “corporate entrepreneurship” (Guth & Ginsberg, 1990), “corporate venturing” (Vesper, 1990) and “internal corporate entrepreneurship” (Schollhammer, 1982) have been aligned together and share the same meaning. Corporate entrepreneurship is defined 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” (Sharma & Chrisman, 2007, p. 8). Scholars have identified some factors that affect the level of intrapreneurship, such as risk taking, innovativeness, proactiveness and competitive energy (Dess et al., 2003; Sharma & Chrisman, 2007).

Today, the corporate entrepreneurship concept is still in need of further research to be developed (Jong et al., 2015, Neessen et al., 2019). Therefore, in this thesis, I analyse corporate entrepreneurship in an emerging economy, namely Saudi Arabia. Entrepreneurship is relatively new to Saudi Arabia compared to Western contexts where most research is conducted (Hughes & Mustafa, 2017). As a result, there are few studies about entrepreneurship in this context. Moreover, only a few (less than ten) have been conducted on subjects relevant to corporate entrepreneurship in the Gulf region. Furthermore, no research on this topic has been performed in Saudi Arabia. After doing initial research about intrapreneurship in the Gulf region, very few articles on subjects relevant to intrapreneurship were found, one being by Rodrigues (2010). Rodrigues measures the intrapreneurial intensity index based on specific constructs. Another investigated whether the lack of entrepreneurship in publicly listed GCC firms affects their ability to acquire debt financing (Chowdhury & Maung, 2013).

Saudi Arabia is considered one of the promising economies globally in the current period (Abu Bakar et al., 2017), and the King has revealed the country’s Vision 2030, which clearly states that Saudi Arabia is aiming to reduce its dependency on oil (Even & Guzansky, 2016). One of the major themes that the country is aiming to focus on is diversifying the total revenue from different sectors, which is a programme under one of the main three themes of Vision 2030

called “A Thriving Economy”. This indicates that organizations are being encouraged to develop new products and services that could reach a global level (Nurunnabi, 2017). Saudi Arabia has depended on oil and natural resources for decades, but the government has decided to shift to a knowledge resource strategy. A key factor that the Saudi government is focusing on is entrepreneurial activities (Alshumaimri et al., 2012). For example, in July 2002, the Council of Ministers in Saudi Arabia approved a national policy for science and technology: “The Comprehensive, Long-Term, National Science and Technology Policy” (Khorsheed & Al-Fawzan, 2014).

Performing a systematic literature review revealed that there is a lack of research in emerging economies in the corporate entrepreneurship field. Therefore, conducting research in Saudi Arabia would add to the field of intrapreneurship and help in better understanding the regional conditions and factors that affect the intrapreneurial activities within an existing firm. In this doctoral dissertation, the plan is to study corporate intrapreneurship using three approaches. Therefore, the objective of this chapter is to review the literature about corporate entrepreneurship that uses human capital, dynamic capabilities and institutional economics as theoretical frameworks. Applying a triangulation approach will help in understanding the context of Saudi Arabia better and consequently lead to new research opportunities in the sector.

The SSCI was utilized to research and analyse the articles that I reviewed. I searched for articles published between year 2003 and year 2021. I used the following keywords in my study: “corporate entrepreneurship”, “entrepreneurial employee activity”, “intrapreneurship”, “human capital”, “dynamic capabilities”, “institutional economics”, “emerging economies” and “Saudi Arabia”. The initial search provided 123 articles. Next, I reviewed these extensively and eliminated irrelevant articles beyond my scope, leaving 51 remaining articles.

After this brief introduction, a general framework is presented. Followed by a discussion about the context of Saudi Arabia. Then, a summary is provided to explain the three approaches targeted in the systematic literature review, which is detailed in the following section that is labeled as methodology and results. Finally, the chapter ends with a conclusion that discusses a brief understanding of the systematic literature review.

2.2. Corporate entrepreneurship

The concept of corporate entrepreneurship has been developing over the last four decades (Glinyanova et al., 2021, Peterson & Berger, 1971). With much effort from scholars in the field, the concept showed little progress in understanding the role of intrapreneurs in local and regional development (Hughes & Mustafa, 2017, Mason & Harrison, 2002, Valsania et al., 2016). Corporate entrepreneurship is used to understand entrepreneurship activities in existing organizations. Researchers and academics use multiple terms and definitions for this phenomenon (Ağca et al., 2012; Urbano & Turro, 2013). One of the widely accepted definitions of corporate entrepreneurship is “entrepreneurship within an existing organization” (Antoncic & Hisrich, 2001, p. 498). Baruah and Ward (2014) mentioned that intrapreneurship is a term that describes the innovation practice whereby employees look to initiate new business activities within the organization and pursues different opportunities. Intrapreneurship refers to both the creation of new ventures in an existing organization and innovation and strategic renewal leading to transformation (Parker, 2011). Corporate entrepreneurship goes through three processes: innovation, venturing and strategic renewal (Yiu et al., 2007). Summarizing previous definitions, Parker (2011) stated that intrapreneurship, also known as “corporate entrepreneurship” and “corporate venturing”, is the practice of developing a new venture in an existing venture to exploit a new opportunity and create economic value.

Intrapreneurship helps firms to renew their businesses, innovate, enhance their performance, and adapt to changes in their internal and external environments (Adachi & Hisada, 2017, Ribeiro Soriano et al., 2012, Turro et al., 2020, Yela Aránega et al., 2020). Organizations that support intrapreneurship are the ones that achieve a higher number of product innovations and better growth performance (Benitez-Amado et al., 2010; Urbano & Turro, 2013). Organizations that enhance the working environment by being innovatively oriented will achieve products and process innovation more easily (Khazanchi et al., 2007). Innovations in organizations, especially in a highly volatile environment, are needed to maintain competitive advantage and respond to the changes in the environment they are surrounded by (Bruton et al., 2008). Hellmann (2007) divided firms’ policies on innovation into four equilibriums, namely focused equilibrium, stubborn equilibrium, intrapreneurial equilibrium and entrepreneurial equilibrium. The first two equilibriums discourage innovations other than in core tasks, whereas the last two encourage innovations and opportunities with a slight change between the two. Intrapreneurial equilibrium directs employees’ innovation legal rights to the

firm, whereas entrepreneurial equilibrium directs the innovations legal rights to individuals (Hellmann, 2007).

Most of the papers produced in the corporate entrepreneurship field study the nature of this phenomenon and focus on the performance of organizations (Antoncic & Hisrich, 2001; Lages et al., 2017; Ribeiro Soriano et al., 2012). Also, studies show that corporate entrepreneurship helps in enhancing economic growth (Urbano & Turro, 2013). Zahra and Covin (1995) studied the influence of corporate entrepreneurship on financial performance over seven years. The results suggest that corporate entrepreneurship has a positive impact on financial performance. Intrapreneurship can help firms to enhance their performance (Antoncic & Hisrich, 2001; Ribeiro Soriano et al., 2012).

This study will focus on internal and external factors that support corporate entrepreneurship activities in Saudi Arabia. Scholars identified two main sets of predictors that affect intrapreneurial activities when they compared intrapreneurial activities in the United States and Slovenia. The two predictors are the external environment of the firm and the characteristics of the firm (Antoncic, 2007). Not only do external (environmental) elements, such as formal and informal institutions, condition corporate culture but also internal factors, such as resources and capabilities, play a more significant role in conditioning corporate culture (Urbano & Turro, 2013). The characteristics of the firm play a vital role in corporate entrepreneurship. One of the characteristics of a firm is communication. It is important that firms increase their quality and quantity of communications when an intrapreneurial activity is taking place within them (de Ven et al., 1983). Another characteristic that plays a role in intrapreneurship is the involvement of management and top management support when intrapreneurial activities take place (Merrifield, 1993). When it comes to firms' behaviour toward intrapreneurial activities, firms respond to environmental conditions (Zahra, 1993a). Firms that can develop a working environment that encourages innovation can improve products and processes easily (Khazanchi et al., 2007).

Literature focuses mostly on industry-related factors when analysing external conditioning factors for intrapreneurship (Turro et al., 2016). Previous researchers described some of the characteristics of external factors, such as external pressure and social need (Stecker, 2014; Zahra et al., 2009). As an example, one of the external factors is industry growth and the increasing demand for new products (Zahra, 1993b). In another example, one of the external

factors is dynamism, which refers to the continuous change in the firm's market (Antoncic & Hisrich, 2000).

2.3.The Context of Saudi Arabia

Saudi Arabia is one of the developing countries with a promising growing economy which per capita income rose from around 17.000\$ in 2007 to 21.000\$ in 2017 (Abu Bakar et al., 2017). The Saudi economy, mainly, dependent on oil production since it was discovered in 1938, holding around 75% of the total exports of the country (Alkhatlan, 2013). With the oil prices dropping from around 140\$ per barrel in 2008 to 31\$ per barrel in 2009, the government realized that they no longer can meet their commitment to the general population, including government employees and the private sector (Hertog, 2013). So, the government has made clear its intention to diversify its total income, depend less on oil, and rely more on knowledge-based revenue (Alrashidi & Phan, 2015).

In 2016, the Saudi government announced a new vision, which is called Vision 2030, where one of its main themes is a “diversified economy” that aims to encourage start-ups and growing organizations to export their product beyond the country's borders (Even, 2016). Following the vision objectives, public institutions and existing government's arms started to activate programs supporting start-ups and existing organizations. For example, a new government agency called Monsha'at was established in 2016 that supports start-ups launching and scaling up (Aloulou and Al-Othman, 2021). Also, new accelerators and incubator programs were launched in public universities, such as King Abdul-Aziz University.

In addition, to the economic factor, social factors play vital roles in CE activities. In early 1990, when the government was able to secure reserved income, government jobs were the dream career for the Saudi population. However, when the government decided to diversify its income, they launched a study abroad program where students seeking higher education and meeting the requirements of this program have the option to receive a full scholarship from the government to study abroad (Pavan, 2013). This program contributed to breaking the tribal and traditional restrictions that exist in the Saudi population and started building a solid infrastructure for the Saudi economy to open to the world allowing foreign investors to launch organizations without Saudi partners. Since then, the young population (less than 35 years old), who today represent 58% of the total population in Saudi Arabia (World Bank, 2019), shifted their career dream from securing a governmental position to be creative in their field or be successful entrepreneurs.

2.4. Conceptual framework: human capital, dynamic capabilities and institutional economics

Human capital

The world is moving towards a knowledge-based economy that depends on social, customer and human capital. Human capital is a critical resource and the key to value creation in the information age (Stewart & Ruckdeschel, 1998). Becker (1995) stated that human capital is the set of skills and knowledge that individuals hold and that they typically develop through investments in education and training, and various other experiences. One of the primary sources for competitive advantage is human capital (Coleman, 2009). An organization's success and failure do not depend solely on economic performance. Human capital plays a significant part in firms' performance (Gimeno et al., 1997). Many studies of OECD (Organisation for Economic Co-operation and Development) countries have found a positive relationship between human capital and entrepreneurship (Alshumaimri et al., 2012). One of the main issues that Saudi Arabia, for example, is facing is human capital. A survey indicated that when Saudi Arabia started moving to e-services, they not only confronted a significant lack of IT experts but they also found that talented employees prefer to work in the private sector because salaries are higher than in the public sector (Alshehri & Drew, 2010). Therefore, analysing human capital is vital for understanding the Gulf region's human capital and thus corporate entrepreneurship.

Dynamic capabilities

After analysing corporate entrepreneurship at the individual level, I investigate dynamic capabilities in Saudi Arabia. Some scholars have described dynamic capabilities in vague terms. However, other scholars argue that it can be defined in terms of specific routines that organizations could adapt (Eisenhardt & Martin, 2000). Dynamic capabilities can be described as "the ability to reconfigure a firm's resources and routines in the manner envisioned and deemed appropriate by its decision-maker(s)" (Zahra et al., 2006, p. 918). Dynamic capabilities refer to how an organization structures, combines and recombines its resources, such as employees and facilities, to generate new value-creating strategies (Grant, 1996). Dynamic capabilities are focused on strategic change and associating the organization with the environment (Zahra et al., 2006). The effectiveness, speed and efficiency of organizations depend on the level of dynamic capabilities of the firm (Chmielewski & Paladino, 2007). Dynamic capabilities are essential for controlling entrepreneurial resources in order to improve the performance of new ventures (Wu, 2007). When new ventures function in highly dynamic

environments, the workers face vague value-judgment standards and disturbing environments for the selection of operational strategies; these issues may force operators to make quick strategic decisions using limited information on the company's operational environment to create dynamic capabilities (Jiao et al., 2013). Managers play a vital role in dynamic capabilities and receive special attention in term of dynamic managerial capabilities (Adner & Helfat, 2003). Also, lower-level managers have an important part to play in the dynamic capabilities of a firm (Teece, 2016). Understanding dynamic capabilities in the Gulf region would aid researchers who are interested in exploring this area when it comes to corporate entrepreneurship.

Institutional economics

Institutions are another significant factor that can enhance or reduce intrapreneurial activities in each region. Institutions can be formal or informal (North, 1990). An institutional environment can be described as comprising stable rules, social standards and cognitive structures in a union that guide, encourage or discourage business activity (Scott, 1995). Institutions put the rules of the game in place and entrepreneurs are the ones who play the game. The rules include formal and informal institutions. Formal institutions comprise legal terms and conditions, as well as policy and procedures. Informal institutions consist of values, norms and unwritten roles (North, 1990). Playmakers (formal institutions) and game players (informal institutions) interact in a way that forms the evolution of an economy (Ring & Nooteboom, 2003). "Institutions can be formal, such as political and economic rules and contracts, or informal, such as codes of conduct, conventions, attitudes, values and norms of behaviour" (Urbano & Turro, 2013, p. 382). If intrapreneurs are present in an environment that has stable and efficient institutions, they will find themselves working in a less uncertain and lower-risk market (Welter & Smallbone, 2011). When a region has established strong economic institutions, it is easier for entrepreneurs to gain access to dependable information on customers, product quality and features, financial supporters and the quality of talent from regional markets (Khanna & Palepu, 2000). Thus, using institutional economics to analyse the Gulf region will reveal topics and research opportunities that need to be addressed in the field of corporate entrepreneurship.

2.5. Methodology and results

In this literature review, I employed the methodology used by Alvarez et al. (2014). I used the SSCI to research and analyse the articles that I reviewed. I researched articles published from

2003 to 2021 with keywords in titles, abstracts and text using the Web of Science tool. The keywords used were “corporate entrepreneurship”, “intrapreneurship”, “corporate venturing”, “institutional economics”, “human capital”, “dynamic capabilities”, “emerging economies” and “Saudi Arabia”. These keywords were chosen carefully. This thesis aims to analyse corporate entrepreneurship, also known as “intrapreneurship”, on individual, corporate and environmental levels in an emerging economy, namely Saudi Arabia. Therefore, I found that institutional economics, human capital and dynamic capabilities fit properly to achieve my goal. The research resulted in 123 articles. Next, I reviewed these extensively and eliminated irrelevant articles, leaving 51 remaining. Then I studied the remaining research to analyse the approach and the field of the research, the journals and publication year, the level of analysis, the techniques that were used and the impact of each article (see appendix).

Qualitative analysis

As previously stated, this dissertation will analyse corporate entrepreneurship using different approaches. The approaches I use are human capital, dynamic capabilities and institutional economics. Therefore, in researching the concept of corporate entrepreneurship I divided the findings into three categories: human capital, dynamic capabilities and institutional economics. The table below shows the categorized articles of the quantitative analysis.

Table 2.1. Articles Categorized by Approach

Approach	No.	Articles
Human Capital	17	Adachi and Hisada (2017), Alshumaimri et al. (2012), Braunerhjelm et al. (2018), Chang et al. (2021), Erogul and McCrohan (2008), Franco and Pinto (2017), Gawke and Gorgievski (2017), Gawke et al. (2018), Guerrero et al. (2019), Hayton (2003), Kor and Sundaramurthy (2009), Moriano et al. (2014), Park et al. (2014), Peña-Ayala and Villegas-Berumen (2020), Rigtering and Weitzel (2013), Turro et al. (2020), Wright et al. (2007)
Dynamic Capabilities	18	Agca et al. (2012), Ahsan and Fernhaber (2019), Alpkan et al. (2010), Altinay (2004), Antoncic and Antoncic (2011), Arend (2014), Benitez-Amado et al. (2010), Haase et al. (2015), Lages et al. (2017), Lim and Kim (2020), O’Connor et al. (2008), Parker (2011), Skarmeas et al. (2016), Rigtering et al. (2019), Teece (2016), Toledano et al. (2010), Turro et al. (2013), Yiu et al. (2007)

<p style="text-align: center;">Institutional Economics</p>	<p style="text-align: center;">16</p>	<p>Ahmad et al. (2018), Alshumaimri et al. (2010), Antoncic (2007), Berzin et al. (2016), Gomez-Haro et al. (2011), Hughes and Mustafa (2017), Javalgi and Todd (2011), Jiao et al. (2013), Khorsheed and Al-Fawzan (2014), Ma et al. (2016), Majumdar (2007), Moser et al. (2015), Rahman (2018), Turro et al. (2016), Urbano and Turro (2013), Wilden et al. (2013)</p>
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Human capital

Human capital consists of a set of skills and knowledge that individuals carry and maintain; it is usually acquired through investments in education and training, and various other experiences (Becker, 1995). Researchers analysed human capital using gender, education, age, managerial skills, internal environment factors, relationships. Regarding gender, Adachi and Hisada (2017) studied start-up activities and the gender gap to determine whether it comes from a family business or employment status. They concluded that working as a part-time employee increases the likelihood of becoming an entrepreneur, and being an independent entrepreneur differs according to gender. Erogul and McCrohan (2008) explored and investigated female entrepreneurs from the United Arab Emirates and found that dependency is the primary motivation that drives Emirati females to become entrepreneurs. For education, Peña-Ayala and Villegas-Berumen (2020) studied how education affects students' entrepreneurial activities in two countries, namely Mexico and Spain. The results suggest that the location of the city, the formal education students receive and the inner concerns that students have are the most significant factors that influence entrepreneurial activities in individuals. Alshumaimri et al. (2012) examine scientist entrepreneurship in universities in Saudi Arabia and found key elements of scientist entrepreneurship, contrary to what they wrote in the literature based on OECD countries. Researchers used age as a control variable in several studies, however, Guerrero et al. (2019) studied how a diversified workforce influences corporate entrepreneurship determinants. The results of generational cohort analysis suggest that the younger generation (millennials) are more likely to be involved in corporate entrepreneurship activities. Related to managerial skills, Moriano et al. (2014) examined the effect of managers' leadership style on employees' intrapreneurial behaviour. The result indicated that transformational leadership has a positive effect whereas transactional leadership has a negative influence. Kor and Sundaramurthy (2009) examined whether outside directors' board membership and managerial experience have an additive effect on a firm, and the results showed that having an outside directors' board membership and managerial experience would

have a strong additive effect on firm growth. Chang et al. (2021) analysed senior managers, middle managers and employees in organizations and found that human capital partially mediates the relationship between firms' performance and corporate entrepreneurship activities in organizations.

Literature also focuses on the relationship between employees. Gawke et al. (2018) studied how intrapreneurial activities in an organization affect employees and found a positive change in employees' resources. Personal resources predicted a higher and more stable experience in the workplace during the study. Wright et al. (2007) reviewed articles on the human capital characteristics of individuals and teams, and also outlined a research agenda for firms, entrepreneurial groups and individual entrepreneur levels. Lastly, they debated managerial and policy implications. Finally, researchers analysed how the internal environment affects human capital, which affects organizational performance. Braunerhjelm et al. (2018) tested how labour mobility affects innovation distribution by firm size, and the result showed a positive and substantial impact on a firm's output. Franco and Pinto (2017) studied archivists in the municipal and how likely they are to become intrapreneurs in the organization where they perform their duties. The study showed evidence that work mentality is changing gradually but no certain actions are awakening the practice of intrapreneurship. Rigtering and Weitzel (2013) took a bottom-up approach and focused on employee behaviour and how it can be encouraged toward intrapreneurship. The results suggested that formal factors such as resource availability affect employees' intrapreneurial activities and informal factors such as trust in the direct manager. Innovativeness and personal initiatives play a role in enhancing the intrapreneurial activity in an employee. Hayton (2003) studied the link between human capital management and human resources management and the study showed a positive impact. Park et al. (2014) proposed a theoretical model to understand how an organization can enhance employees' voluntary entrepreneurship. The results show that building up relationships among employees can motivate employees to engage in voluntary intrapreneurship.

Dynamic capabilities

Literature analysed dynamic capabilities to suggest the causes, the dynamics, and the outcomes. Mainly, I divided the finding into five themes. Those themes are work atmosphere, human roles to dynamic capabilities, managerial support, external environment, and the outcome that dynamic capabilities can cause. From work atmosphere perspective, Antoncic

and Antoncic (2011) focused in their study on employee satisfaction, intrapreneurship and firm growth, and found that there is a relationship between these three factors. Haase et al. (2015) studied in depth the interface between organizational learning and intrapreneurship. The result identified four dimensions of organizational learning that are linked to intrapreneurship. Lages et al. (2017) analysed and explained the determinants that affect the intrapreneurship process in the healthcare service including public, private and social sectors. The results show that healthcare organizations create a favourable internal environment and healthcare teams present an intrapreneurial spirit. Skarmeas et al.'s (2016) study drew together resource-based, dynamic capabilities and organizational learning theories to explore the internal mechanisms through which intrapreneurship affects current and future export performance. The study supported the theoretical framework and added valuable information to the literature. Regarding human roles, Altinay (2004) investigated the importance of the intrapreneurial role of organizational members in franchising decisions. The study was about an international hotel group. The results suggested that the human role plays an important role in the expansion process. Toledano et al. (2010) analysed in-depth collaboration among individuals to develop entrepreneurial actions in family businesses. The paper's results show that corporate entrepreneurship activities can be identified from action among employees and owners or managers.

Related to managerial support, Alpkan et al. (2010) investigated the direct and indirect effects of organizational support and human capital on companies' innovation levels. The results showed that management support for idea development and risk-taking has a positive effect on innovation performance. Reward systems and free time have no impact on innovativeness. Rigtering et al. (2019) analysed the managerial role in inviting employees to be involved in corporate entrepreneurship activities. The paper suggests several methods, such as opt-out to increase employees' participation without reducing the quality of ideas. Benitez-Amado et al. (2010) analysed the relationship between two types of information technology resource and intrapreneurship cultures and how these affect firm performance. The results suggested that technological IT and managerial IT have a positive effect on intrapreneurial culture. Also, investing in technological IT and managerial IT has a positive impact on firm performance. Teece (2016) analysed entrepreneurial management and organizational capabilities with a view to better understanding policymakers of industrial dynamics and the requirements of innovation. Turro et al. (2013) analysed from a resource-based perspective the resources and

capabilities of companies that shape intrapreneurship. The findings suggested that both resources and capabilities affect intrapreneurial activities.

Also, the literature suggests that the external environment plays a major role in dynamic capabilities. Agca et al. (2012) studied the relationships among external environment, intrapreneurship and performance in Turkish manufacturing firms. The results suggested that environmental factors have a significant impact on intrapreneurial activities. While profitability has a negative and significant impact, growth is found to be significantly and positively associated only with new venturing. Finally, innovation is positively and significantly related to the satisfaction of both employees and customers. Ahsan and Fernhaber (2019) studied the relationship between opportunities and dynamic capabilities and found that dynamic capabilities foster seeking opportunities, which offers organizations a competitive edge. Wilden et al. (2013) found that dynamic capabilities depend on the competitive intensity that firms face. Yiu et al. (2007) focused on ownership advantages and strategic actions that firms have to shape in response to developing institutional characteristics when they are pursuing international presence. The empirical results showed that there is a relationship between firm ownership and international venturing, which is moderated by local competition and export intensity.

Finally, the literature suggests that dynamic capabilities should be at a high level to enhance organizational performance. Lim and Kim (2020) investigated the influence that dynamic capabilities have on the relationship between entrepreneurial orientation and firms' performance. The results suggest that dynamic capabilities mediate this relationship. Augusto et al. (2012) found a positive impact of intrapreneurship on firm performance. O'Connor et al. (2008) reported on a longitudinal study conducted over three and a half years among 12 US large established companies. The report contributed to my consideration of the expansion of dynamic capabilities in multiple situations. Parker (2011) studied factors that determine whether new business ideas are exploited by starting a new venture for an employer or independently. The findings reveal a systematic difference between the drivers of nascent intrapreneurship and nascent entrepreneurship. The key difference is that entrepreneurs tend to talk to customers directly while intrapreneurs search for competitors and develop business-to-business products.

Institutional economics

Studies utilized institutional economics to analyse corporate entrepreneurship from three main angles, which are: individual level, organisational level and regional level. From an individual level perspective, Turro et al. (2020) analysed the extent to which gender plays a role in corporate entrepreneurship in 60 countries using the Global Entrepreneurship Monitor database. The results suggest that gender has an impact on the antecedents of corporate entrepreneurship. Rahman (2018) described the experience of Bangladeshi entrepreneurs living in Saudi Arabia. He focused on the dynamics of Gulf migration and how Bangladeshi workers become entrepreneurs. His study suggested that migrant entrepreneurs are rooted within the dynamics of the migration route and the broader aspects on which this depends. Regarding the organizational level, by using a qualitative approach, Hughes and Mustafa (2017) argued that contextual factors might weaken the feasibility of internal qualification in emerging economy contexts. The result showed that the organization of the internal environment for corporate entrepreneurship is more complicated than the one they present in the literature. Turro et al. (2016) examined the internal and external factors that affect intrapreneurship in the Spanish context. Through a double conceptual framework, the results show the effect of internal and external factors on intrapreneurship. Urbano and Turro (2013) studied the internal and external factors that shape corporate entrepreneurship, and the results reinforce the importance of internal factors compared to external factors. Javalgi and Todd (2011) studied entrepreneurial behaviour, firm resources and commitment to internationalization for SMEs in India seeking international presence. They found that educational level and international experience were a significant indication of the degree of internationalization of a firm. Majumdar (2007) examined the pattern of growth that was shaped by the corporate sector in the Indian industry for over 25 years. The sample included the growth of private firms, private equity investment, and the decline in state-owned firms and equity capital. The author thought that this was a strategy to enhance economic performance and expected that in a decade the government's share could be zero.

Finally, from regional level perception, Alshumaimri et al. (2010) explained and identified the new policy and strategies that universities are using nowadays in Saudi Arabia and how they facilitate technology transfer in those organizations seeking innovation activities and economic growth. The results prove that a transfer revolution is taking place in Saudi Arabia with the goal of economic growth. Antoncic (2007) examined the pattern and the level of relationships across two countries, the United States and Slovenia, by testing two models. The tests suggested that relationships have a positive impact on standards. The results of this

examination can be generalized since they were from two different economies and a variety of industries were included in the sample. Berzin et al. (2016) explained that changes in the needs of the target population along with financial pressure are the primary motivators for innovation. The results showed a dynamic relationship between innovation and sustainability. Gomez-Haro et al. (2011) explained the different dimensions of an institutional environment that influence corporate entrepreneurship at a regional level. The results showed that both normative and cognitive dimensions of the regional environment influence corporate entrepreneurship. Moreover, they showed that the regulatory dimension affects the type of corporate entrepreneurship. Jiao et al. (2013) explored the effect of the rapidly changing environment in China on the relationship between new venture performance and dynamic capabilities. The results suggested that in such an environment the dynamic capabilities are more efficient. Khorsheed and Al-Fawzan (2014) explained a new model that Saudi Arabia is moving toward in its university policies and strategies that focus on industry-oriented problems and innovation. Ma et al. (2016) investigated the impact of subnational-level home country institutional environments and firm-level political capital on an emerging economy. They found that there is a relationship between developing a subnational institutional environment in the home country and firms' degree of internationalization that is being moderated by political capital. Moser et al. (2015) explained the potential of new economic cities that are being established in Saudi Arabia and mentioned that Saudi Arabia could be an oil importer as early as 2030.

Quantitative analysis

In this section, I categorize articles based on different methods. First, I focus on the fields of research in which the articles were written (see Table 2.2). I found that articles published related to CE that used human capital, dynamic capabilities and/or institutional economics were mostly published in the business and economics field, representing 22%, 31% and 20%, respectively.

Table 2.2. Approach and Field of the Analysed Articles

Approach and field		Articles		Author and year of publication
		No.	%	
Human Capital	Business & Economics	11	22%	Adachi and Hisada (2017), Alshumaimri et al. (2012), Braunerhjelm et al. (2018), Change et al. (2021), Eroglu and McCrohan (2008), Guerrero et al. (2019), Moriano et al. (2014), Park et al. (2014), Peña-Ayala and Villegas-Berumen (2020), Rigtering and Weitzel (2013), Wright et al. (2007)
	Psychology	4	8%	Gawke and Gorgievski (2017), Gawke et al. (2018), Hayton (2003), Kor and Sundaramurthy (2009)
	Library Science	1	2%	Franco and Pinto (2017)
Dynamic Capabilities	Business & Economics	16	31%	Agca et al. (2012), Ahsan and Fernhaber (2019), Alpkhan et al. (2010), Altinay (2004), Arend (2014), Haase et al. (2015), Lages et al. (2017), Lim and Kim (2020), O'Connor et al. (2008), Parker (2011), Rigtering et al. (2019), Skarmear et al. (2016), Teece (2016), Toledano et al. (2010), Turro et al. (2013), Yiu et al. (2007)
	Computer Science	2	4%	Antoncic and Antoncic (2011), Benitez-Amado et al. (2010)
Institutional Economics	Business & Economics	10	20%	Alshumaimri et al. (2010), Gomez-Haro et al. (2011), Hughes and Mustafa (2017), Javalgi and Todd (2011), Jiao et al. (2013), Khorshed and Al-Fawzan (2014), Ma et al. (2016), Majumdar (2007), Turro et al. (2020), Urbano and Turro (2013)
	Public Administration	3	6%	Berzin et al. (2016), Turro et al. (2016), Wilden et al. (2013)
	Computer Science	1	2%	Antoncic (2007)
	Library Science	1	2%	Ahmad et al. (2018)

	Sociology	1	2%	Rahman (2018)
	Urban Studies	1	2%	Moser et al. (2015)
Total		51	100%	

Next, I focused on the years that articles were published in. I found that the field of CE has been growing in the last few years. The average percentage of articles published in the first ten years is 3.7%, however the average of the last nine years almost doubles to reach 7% (see Table 2.5). Therefore, I argue that due to the importance of CE activities to organizational performance and economic development, researchers are more interested in studying this phenomenon.

In the third part of my qualitative analysis, I focused on the level of analysis at which research was conducted. I categorized the review articles into three levels, i.e. macro, micro and meso. I found that 44% of the articles followed the macro approach, while 35% focused on the meso approach and 22% focused on the micro approach (see Table 2.3).

Table 2.3. Level of Analysis

Level of Analysis	Article		Author and year of publication
	No.	%	
Macro	22	43%	Ahmad et al. (2018), Alpkhan et al. (2010), Alshumaimri et al. (2010), Altinay (2004), Antoncic (2007), Franco and Pinto (2017), Gomez-Haro et al. (2011), Guerrero et al. (2019), Hughes and Mustafa (2017), Javalgi and Todd (2011), Jiao et al. (2013), Lim and Kim (2020), Ma et al. (2016), Majumdar (2007), Park et al. (2014), Rahman (2018), Turro et al. (2016), Turro et al. (2013), Turro et al. (2020), Urbano and Turro (2013), Wilden et al. (2013), Yiu et al. (2007)
Micro	11	22%	Adachi and Hisada (2017), Ahsan and Fernhaber (2019), Chang et al. (2021), Erogul and McCrohan (2008), Gawke et al. (2018), Hayton (2003), Moriano et al. (2014), Parker (2011), Rigtering and Weitzel (2013), Teece (2016), Wright et al. (2007)

Meso	18	35%	Agca et al. (2012), Alshumaimri et al. (2012), Antoncic and Antoncic (2011), Arend (2014), Benitez-Amado et al. (2010), Berzin et al. (2016), Braunerhjelm et al. (2018), Gawke and Gorgievski (2017), Haase et al. (2015), Khorsheed and Al-Fawzan (2014), Kor and Sundaramurthy (2009), Lages et al. (2017), Moser et al. (2015), O'Connor et al. (2008), Peña-Ayala and Villegas-Berumen (2020), Rigtering et al. (2019), Skarmeas et al. (2016), Toledano et al. (2010)
Total	51	100%	

In the fourth part of this section, I focus on the analysis technique that articles used. I find that multiple linear regression is the analysis technique most widely used by previous literature, at 31%, followed by logit and probit regression with 22% of the reviewed articles (see Table 2.4).

Table 2.4. Main Statistical Techniques used in the Analysed Articles

Technique	Article		Author and year of publication
	No.	%	
Multiple Linear Regression	16	31%	Agca et al. (2012), Alpkan et al. (2010), Arend (2014), Braunerhjelm et al. (2018), Gomez-Haro et al. (2011), Hayton (2003), Javalgi and Todd (2011), Jiao et al. (2013), Lages et al. (2017), Majumdar (2007), Rigtering and Weitzel (2013), Skarmeas et al. (2016), Turro et al. (2016), Turro et al. (2013), Urbano and Turro (2013), Yiu et al. (2007)
Logit/Probit	11	22%	Alshumaimri et al. (2012), Benitez-Amado et al. (2010), Franco and Pinto (2017), Guerrero et al. (2019), Kor and Sundaramurthy (2009), Ma et al. (2016), Moriano et al. (2014), O'Connor et al. (2008), Parker (2011), Turro et al. (2020), Wilden et al. (2013)
Content Analysis, Cross-Case Analysis	5	10%	Ahmad et al. (2018), Altinay (2004), Haase et al. (2015), Hughes and Mustafa (2017), Toledano et al. (2010)
Other	19	37%	Adachi and Hisada (2017), Ahsan and Fernhaber (2019), Alshumaimri et al. (2010), Antoncic (2007), Antoncic and Antoncic (2011), Berzin et al. (2016), Chang et al. (2021), Erogul and McCrohan (2008), Gawke and Gorgievski (2017), Gawke et al. (2018), Khorsheed and Al-Fawzan (2014), Lim and Kim (2020), Moser et al. (2015), Park et al. (2014), Peña-Ayala and

			Villegas-Berumen (2020), Rahman (2018), Rigtering et al. (2019), Teece (2016), Wright et al. (2007)
Total	51	100%	

Table 2.5. Journals and Published Articles Per Year

Journal	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total		
																				No.	%	
International Entrepreneurship and Management Journal										1	2	1			1						5	10%
Small Business Economics												1			1	1	1				4	8%
Industrial Management & Data Systems					1			1	1												3	6%
Entrepreneurship Theory and Practice					2																2	4%
Journal of Business Venturing									1								1				2	4%
Journal of Business Research									1					1							2	4%
Management Decision								1	1												2	4%
Other journals with one article published	1	1			1	2	1	2		1	3	2	2	4	3	3	1	3	1		31	60%

Total	1	1	0	0	4	2	1	4	4	2	5	4	2	5	5	4	3	3	1	51	100%
	2%	2%	0%	0%	8%	4%	2%	8%	8%	4%	10%	8%	4%	10%	10%	8%	6%	6%	2%	100%	

Finally, I sorted the reviewed articles by the number of citations (see Table 2.6). I found that Yiu et al. (2007) was cited 315 times, making this article the most cited article among the 51 I reviewed, followed by Hayton (2003), which was cited 123 times, and Kor and Sundaramurthy (2009), which was cited 122 times.

Table 2.6. Top 10 Most Cited Articles

No.	Article	Citations in SSCI	
		No.	%
1	Yiu et al. (2007)	315	22%
2	Hayton (2003)	123	9%
3	Kor and Sundaramurthy (2009)	122	9%
4	Alpkan et al. (2010)	112	8%
5	Wilden et al. (2013)	95	7%
6	Wright et al. (2018)	82	6%
7	Parker (2011)	66	5%
8	Javalgi and Todd (2011)	65	5%
9	Antoncic (2007)	49	3%
10	Benitez-Amado et al. (2010)	48	3%

2.6. Conclusion

This chapter is a general overview of the literature over the past two decades in the field of CE that followed one or more of the approaches I am following in this thesis. Conducting a literature review plays one of the main roles in developing a research field (Bland et al., 1995). In this regard, despite the fact that research in CE is growing, there have been few systematic literature reviews conducted in this field. Therefore, this systematic literature review provides an overview of the work of CE related to the three approaches I use. Specifically, I reviewed 123 articles using the keywords I mentioned earlier and focused on 51 articles that are most relevant to my framework. Hence, this chapter assists researchers by providing a summary of this line of research.

The literature in this chapter analysed corporate entrepreneurship from three angles: human capital, dynamic capabilities, and institutional economics. From a human capital perspective, researchers tend to analyse gender, education, labor force, labor mobilities, resources, leadership skills, employees satisfaction, and employees relationship. Their studies focused on

how those human capital factors would affect corporate entrepreneurship activities. From dynamic capabilities perspectives, researchers focused on what factors are increasing dynamic capabilities in organizations. They found that external environment, organizational support, managerial role, employees satisfaction, and competitive markets increase the dynamic capabilities in organizations. Also, researchers analysed outcomes that result from dynamic organizations. They found that dynamic capabilities encourage organizations to seek opportunities and enhance their performance. From an institutional economics viewpoint, researchers tend to analyse corporate entrepreneurship in a broader view. They tend to analyse the environment surrounding organizations. For example, researchers analysed technology facilitation by governments, economic growth, the relationship between countries, population needs, rapid change environment, social changes in a context. Research falling under the institutional economics approach, tend to analyse how those environmental factors surrounding organization affect corporate entrepreneurship in organizations. The analysis results indicate that the CE field of research is developing fast, as mentioned earlier. I noticed that the main research questions that the authors answer are related to consequences and antecedents of CE. I also noticed that authors focus on environmental conditions along with internal conditions to position their studies. However, I found that the body of literature is still in need of integrated methods to understand the CE phenomenon (Neessen et al., 2019).

This chapter has some limitations that should be mentioned. First, although the approach I used in my analysis is consistent with previous systematic literature reviews (Alvarez et al., 2014), I focused on the SSCI using the Web of Science service. Hence, there is relevant research that might have been published that is not included in my systematic literature review. In addition, I focused on published articles, yet there are other studies that were not mentioned in this chapter, such as doctoral theses, books and congress proceedings, among others. Also, the number of citations that was mentioned earlier is from the Web of Science server. Therefore, the number might be higher when considering other services. In addition, those cited articles are the ones that have been directly mentioned in other articles. However, other authors are citing an article to criticize. Lastly, this systematic literature review considered three bibliometric techniques (macro, micro and meso), which can be misleading when intending to focus on only one bibliometric technique. Therefore, I suggest conducting an in-depth systematic literature review distinguishing between the macro, micro and meso levels.

Chapter 3

3. DIRECT AND MODERATING DETERMINANTS OF ENTREPRENEURIAL EMPLOYEE ACTIVITY IN AN EMERGING ECONOMY

3.1. Introduction

As mentioned in Chapter 2, entrepreneurship within existing organizations is a vital factor for organizational and economic development (Antoncic & Hisrich, 2001). Scholars have been interested in this type of entrepreneurship since the early 1980s (Aidis et al., 2008; Antoncic & Hisrich, 2001; Miller, 1983; Pinchot, 1985; Wright et al., 2007; Zahra, 1993a). Terms such as “intrapreneurship” (Duncan et al., 1988), “corporate entrepreneurship” (Guth & Ginsberg, 1990), “corporate venturing” (Vesper, 1990) and “internal corporate entrepreneurship” (Schollhammer, 1982) have been used to refer to it. A generally accepted definition of this phenomenon is “entrepreneurship within an existing organization” (Antoncic and Hisrich, 2001, p. 498).

Entrepreneurial employee activity (EEA) refers to bottom-up initiatives developed by employees to change and improve the organizations in which they work (Deprez et al., 2018). Previous research has shown that EEA is essential for organizational performance, growth and development (Antoncic & Hisrich, 2001; McGrath et al., 1994; Valsania et al., 2016). Hence, a significant number of studies have focused on understanding the determinants of EEA. These studies have shown how several factors can enable (or hamper) EEA and emphasise the fundamental role that individual and environmental factors play in EEA (Adachi & Hisada, 2017; Judge & Zapata, 2015; Martiarena, 2013; Parker, 2011; Turro et al., 2020; Yela Aránega et al., 2020).

On the one hand, human capital is one of the critical determinants that help to boost EEA in a given organization (Dess et al., 2003). Research shows that it may be easier for an organization to create and execute intrapreneurial projects when the education level of its employees is high (Neessen et al., 2019) or when its employees believe that they have the set of skills needed to develop intrapreneurial projects (Levie & Autio, 2008) because human capital also contributes to the recognition of business opportunities within the corporate context (Martiarena, 2013). On the other hand, although formal and informal institutions have been studied less from a

quantitative perspective (North, 1990), such institutions also play a fundamental role in determining the level of EEA in an organization. For instance, Judge et al. (2015) found that several factors at the national level influence corporate technological entrepreneurship. Other scholars, such as Urbano and Turro (2013), explained how the external pressures are related to institutions and play a relevant role.

These studies have some limitations and areas that remain unexplored. Although some researchers have studied intrapreneurial activities in different contexts (Antoncic, 2007), the role of environmental factors in EEA has rarely been studied using a quantitative approach. Previous studies have not focused either on the moderating effect of environmental factors on the relationship between individual-level factors and EEA. Hence, although individuals' human capital endowments are relevant for EEA (Martiarena, 2013), the role of the environmental context in this relationship remains unexplored. There is limited knowledge about which country attributes contribute to developing, enhancing and complementing these individual-level traits so that entrepreneurial employee behaviour takes place (De Clercq et al., 2013).

In addition, previous research has rarely addressed how context determines intrapreneurial behaviours outside the traditional Western contexts. Firms in emerging countries tend to experiment with resource constraints, cultural norms and unpredictable market conditions that pose significant challenges for organizational survival and growth. These conditions foster a greater need for firms to behave entrepreneurially (Kuratko, Covin, et al., 2014), and it is necessary to have a better understanding of the entrepreneurial processes in these types of contexts. Hughes and Mustafa (2017) argued that in the case of emerging countries, the role of contextual factors in corporate entrepreneurship is different from that suggested by previous literature. However, they do not test their model quantitatively and further research is needed.

The objective of this chapter is to analyse the direct and moderating effects of human capital and institutional economics factors on EEA in the context of Saudi Arabia. This research contributes to the literature on the antecedents of EEA by extending our knowledge in several ways. First, an analysis of how the determinants of EEA related to individual and environmental factors affect each other contributes to the literature by providing a more complete and precise understanding of the EEA phenomenon and its determinants. Specifically, the role of environmental factors is seen to be more generous as these factors play both a direct and a moderating role. Second, the results of the study show that the impacts of

some of these environmental factors in the context of Saudi Arabia are different from their impacts in Western countries where research on entrepreneurial activities is performed more often (Hughes & Mustafa, 2017; Turro et al., 2014). Therefore, I contribute by showing that the context in which EEA takes place may be more relevant than has been implied in previous research.

After this introduction, a brief literature review and the hypotheses are presented. Subsequently, the methodology is described. The next section explains the empirical results of the study. Finally, I discuss how these findings fit in the current literature and suggest future research lines.

3.2. Entrepreneurial employee activity, human capital and institutional economics

EEA helps organizations to renew their businesses, innovate, enhance their performance and adapt to changes in their internal and external environments (Augusto Felício et al., 2012). Those organizations that support EEA achieve a higher number of product innovations and better growth performance (Benitez-Amado et al., 2010). Organizations that ensure that their working environment is oriented towards innovation achieve product and process innovation more easily (Khazanchi et al., 2007). Innovations in organizations, especially those operating in a highly volatile environment, are needed to maintain competitive advantage and respond to changes in the environment (Bruton et al., 2008). In addition, the involvement of management and the support of top management play a vital role in activating EEA (Merrifield, 1993). Therefore, internal factors play a significant role in EEA (Urbano & Turro, 2013).

The world is moving towards a knowledge-based economy that depends on social, customer and human capital. Human capital is a critical resource and is key to value creation in the information age (Stewart & Ruckdeschel, 1998). As mentioned above, human capital consists of an individual's set of knowledge and skills, which is usually developed through investment in education, training and experience (Becker, 1993). One of the primary sources of competitive advantage is human capital (Coleman, 1988). The success or failure of an organization does not depend solely on economic performance: the human capital of a firm

plays a significant part in the firm's performance (Gimeno et al., 1997). Alshehri and Drew (2010) explained that one of the main issues facing Saudi Arabia is human capital. When Saudi Arabia started moving to e-services, it not only confronted the significant issue of a lack of IT experts but also found that talented employees preferred to work in the private sector because salaries were higher than in the public sector (Alshehri & Drew, 2010). Therefore, analysing human capital is key to understanding EEA in the context of an emerging country such as Saudi Arabia.

Research lacks a clear definition of intrapreneurial skills. However, previous research has shown the same pattern in explaining the classic set of skills needed to be intrapreneurs (Hostager et al., 1998; Neessen et al., 2019; Pinchot, 1985; Pinchot & Pellman, 1999). Intrapreneurial skills can be described as the ability of individuals to take risks, develop and use their processes, and be self-managed and proactive (Hydle et al., 2014). Individuals with higher levels of skill and knowledge should be better at spotting profitable business opportunities (Davidsson & Honig, 2003). Having the necessary set of skills and abilities allows an individual to seek and undertake new opportunities more productively and efficiently (Becker, 1964; Guerrero et al., 2021). When an individual believes that he or she has the skills needed to seek an opportunity, he or she probably has a positive entrepreneurial attitude towards that opportunity (Ajzen, 1991). Intrapreneurial activities take place when employees believe that they have the skills and knowledge needed to execute a business idea (Levie & Autio, 2008). Therefore, employees who have the required set of experiences and skills are more likely to contribute to entrepreneurship activities within the organization for which they work (Bowen & Lawler III, 1992).

As the level of human capital increases within an organization, the corporate culture that promotes EEA also increases (Dess et al., 2003). When a company has employees with a high level of education, it is easier for the company to develop intrapreneurial projects, and the success rate will increase (Neessen et al., 2019). Hitt et al. (2001) concluded that human capital, with implied knowledge, gives organizations a greater competitive advantage than do tangible resources. They also emphasized that organizations should invest in training their employees to improve their human capital resources. Highly innovative organizations are managed by well-educated managers from different fields of expertise and function (Bantel & Jackson, 1989). A high level of education assists in the absorption of new and relative knowledge flow, which increases individuals' capacities (Roach & Sauermann, 2010). Therefore, highly

educated employees have a higher absorptive capacity and, consequently, a greater ability to adapt to new technologies (Zahra & George, 2002). As a result, some companies in developing countries invest in human capital to improve their innovative performance (Alpkan et al., 2010). Saudi Arabia has been investing extensively in higher education. This extensive investment has placed Saudi Arabia among the top four countries in providing funds for students to obtain degrees abroad (Taylor & Albasri, 2014). In 2013, Saudi Arabia started investing nearly \$2.4 billion per year in the King Abdulla Scholarship Programme, which funds students' tuition fees, living expenses and health insurance (Pavan, 2013). Therefore, I present the following hypotheses:

***Hypothesis 1:** Intrapreneurial skills have a positive effect on EEA in Saudi Arabia.*

***Hypothesis 2:** Education has a positive effect on EEA in Saudi Arabia.*

As mentioned in Chapter 2, institutions are factors that condition EEA in any given context. Institutions put the rules of the game in place, and entrepreneurs are the ones who play the game. Formal institutions comprise legal terms and conditions, policy and procedures. Informal institutions consist of values, norms and unwritten rules (North, 1990). If intrapreneurs are working in an environment that has stable and efficient institutions, they will find it to be less uncertain and to have a less risky market (Welter & Smallbone, 2011). When a region has established strong economic institutions, it is easier for entrepreneurs to gain access to reliable information on customers, product quality and features, financial supporters and high-quality talent from regional markets (Khanna & Palepu, 2000).

The number of procedures required to start a new company has been used in the previous literature as a proxy for the effect of formal institutions (Alvarez & Urbano, 2011). In this regard, democratic governments usually make procedures easy in order to assist the private sector and the economy and therefore benefit society (Djankov et al., 2002). Because easy procedures help to make it simple and cheap to start a new business, some governments focus on making procedures more accessible and faster to benefit entrepreneurs starting new companies and organizations starting new ventures (Van Stel et al., 2007). In this regard, Guerrero and Urbano (2020) showed how certain government decisions condition social innovations in emerging economies. Rahatullah Khan (2013) stressed that, in the case of Saudi Arabia, government reforms are helping entrepreneurs to start new businesses by making the

procedures for new start-ups easier. In this context, the ease of creating a new business could lead to less EEA activities. If opportunities can easily be exploited through independent entrepreneurship, employees may prefer to start new companies outside their company's boundaries. Similarly, if starting a new business requires significant effort because of obstacles and barriers, established companies may be more prepared to exploit new business opportunities as they have more knowledge and tangible resources (Parker, 2011; Sakhdari & Burgers, 2018).

The term "status" was first introduced in the early nineteenth century. Status was first defined as an effective claim for social esteem. The term has three main components: social class, social legitimacy and religion (Weber, 1978). To the best of my knowledge, research about social legitimacy and EEA is lacking and those researching the relationship between social legitimacy and independent entrepreneurship have so far made little progress (Praag, 2009). Malach-Pines et al. (2005) found that there is a relationship between high-tech independent entrepreneurs and whether society perceives them as cultural heroes. Thus, social legitimacy has a positive effect on the level of entrepreneurial activities. The way in which independent entrepreneurs are perceived is a factor that shapes people's occupational preferences as well as their behaviour towards entrepreneurship (Parker & Van Praag, 2010). Abu Bakar et al. (2017) studied the propensity to start a new business and found that the perception of high status in Saudi Arabia is significantly related to the possibility of starting up a business. I thus conclude that being respected as an entrepreneur affects people's occupational paths and could make them leave their jobs to become independent entrepreneurs. Based on the previous explanations, the following hypotheses are posited:

Hypothesis 3: Easier procedures for starting a business have a negative effect on EEA in Saudi Arabia.

Hypothesis 4: Social legitimacy has a negative effect on EEA in Saudi Arabia.

Previous research has shown how the institutional environment can moderate the relation between human capital endowments and entrepreneurial activities (Capelleras et al., 2019). Although the relationship between EEA and intrapreneurial skills (Levie & Autio, 2008), education (Neessen et al., 2019) and procedures (Urbano & Turro, 2013) has been established

in the literature, the moderating effect of procedures on these relationships has not been tested. The administration of procedures and financial regulations, along with individual abilities and values, is increasingly considered to have an impact on entrepreneurial initiatives (Bruton et al., 2010). Entrepreneurial employees are more often well educated and have the skills to start a business if they are in an environment that encourages EEA (Bosma et al., 2004). Entrepreneurial activities require human capital in the form of the ability to perform tasks and recognize opportunities in the market (Sweetland, 1996). Employees with skills and new ideas consider the number of rules and procedures they have to follow to decide whether or not to deploy their ideas outside the organization for which they work (Joshi et al., 2019; Turro et al., 2014). If potential entrepreneurs perceive that government regulations are complicated and lengthy, this may discourage them from starting a new business (Djankov et al., 2002). Therefore, I argue that if building a new start-up is difficult from a procedural perspective, this will discourage skilled and educated employees from building new start-ups, and they will seek to put their ideas into practice inside the organization. Based on the previous argument, I propose the following hypotheses:

***Hypothesis 5a:** The relationship between intrapreneurial skills and EEA is moderated by procedures, such that the relationship is stronger when procedures make it difficult to create new start-ups.*

***Hypothesis 5b:** The relationship between education and EEA is moderated by procedures, such that the relationship is stronger when procedures make it difficult to create new start-ups.*

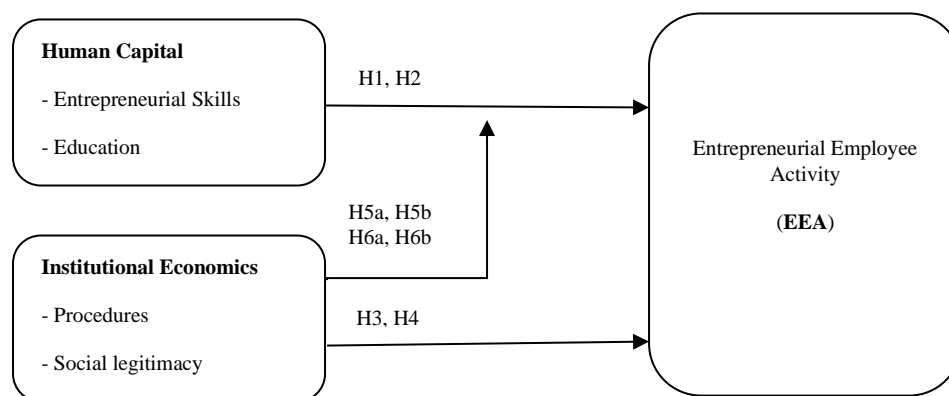
The relationship between EEA and intrapreneurial skills (Levie & Autio, 2008), and between EEA and education (Neessen et al., 2019), has been established in previous literature; however, research investigating how social legitimacy affects these relations is lacking. Cultural values, such as social legitimacy, shape people's interests, preferences and desires and therefore condition people's behaviour, including their behaviour at work (De Clercq et al., 2013). Social legitimacy is mainly conferred through the choices that an individual makes in relation to their educational level and the acquisition of new skills to accumulate human capital (Weiss & Fershtman, 1998). Chang et al. (2008) stated that studies focus on two aspects when considering wealth-induced social status: education-induced social status and physical capital-induced social status. They added that individuals may pursue higher education and acquire

new skills to promote their social legitimacy, and this is known as “education-induced social status”. Yet social legitimacy has been studied from entrepreneurship perspectives. Praag (2009) tested the level of status and what might encourage students to become entrepreneurs. The result suggests that a high level of income and power is the element that best defines status. Societies have different levels of effects on entrepreneurial activities and innovations (Turro et al., 2014). The way in which independent entrepreneurs are perceived is a factor, among others, that shapes people’s occupational preferences as well as their behaviour towards entrepreneurship (Parker & Van Praag, 2010). Therefore, social legitimacy facilitates skilled and educated individuals’ decisions to deploy their business ideas in/outside the organization for which they work. Overall, I posit the following hypotheses:

Hypothesis 6a: *The relationship between intrapreneurial skills and EEA is moderated by social legitimacy, such that the relationship is weaker for higher levels of social legitimacy.*

Hypothesis 6b: *The relationship between education and EEA is moderated by social legitimacy, such that the relationship is weaker for higher levels of social legitimacy.*

Figure 3.1. Conceptual Framework



3.3. Methodology

Data was obtained from the Global Entrepreneurship Monitor (GEM) database. GEM is a not-for-profit social entrepreneurship organization that was founded by the London Business School and Babson College in 1999. The main goal of establishing GEM was to answer the question of why some countries are more entrepreneurial than others. GEM conducts the

world's leading study of entrepreneurship. It has 20 years of data on entrepreneurship and employee entrepreneurial activities. Every year it conducts in excess of 200,000 interviews with upward of two million observations in more than 100 economies. More than 500 specialists in entrepreneurship research work with this data set. In each of the economies that GEM studies, it looks at the entrepreneurial behaviour of individuals, the national context and the impact of the national context on entrepreneurship.

The 2016 Saudi Arabia GEM data set contains a total of 1,499 complete observations for the variables that were used (see Table 3.1). This country aspires to change from an oil-based to a knowledge-based economy with more diversified revenue (Alrashidi & Phan, 2015). One of the areas the government aims to improve is the export of products and services, which means that existing organizations need to grow (Nurunnabi, 2017). Hence, the Saudi government aims to encourage the establishment of new start-ups and the scaling up of existing companies to a global level. Although the relationship between entrepreneurship in established companies and organizational and economic growth has been clearly established (Antoncic & Hisrich, 2001; Augusto Felício et al., 2012; Guth & Ginsberg, 1990), there are no studies about EEA in the context of Saudi Arabia. Researching EEA from human capital and institutional economics approaches offers insights into Saudi culture and business management. "Saudi Arabia is making remarkable social changes and highlighting its determination to move forward to a more prosperous future by providing opportunities for everyone so that they can contribute to the development of the nation to their best abilities" (Khan, 2020, p. 13).

All commands are performed in STATA software. As shown in Table 3.2, some of the variables have high correlations (specifically, procedures and media impact). However, multicollinearity problems tend to be relevant when correlation exceeds 0.80 (Gujarati, 2003); in my case, the highest significant correlation is 0.36. Nevertheless, I conducted a multicollinearity diagnostic test and obtained a mean VIF of 1.11, a highest VIF of 1.24 and a lowest VIF of 1.02. Therefore, multicollinearity does not have a significant effect in my analysis. Given the binary nature of my dependent variable, which indicates whether an employee has been involved in the development of new activities for his/her main employer (1 = yes, 0 = no), I analysed the effect of my variables on EEA through probability models. Similarly to regression analysis, models for binary response extend the values of generalized linear models to better discuss the case of binary response dependent variables. In addition, a logistic regression model allows the estimation of the probability and likelihood of events happening. In my logistic regression

model, I measured the probability that individuals will engage in entrepreneurial employee activity (see Table 3.3). Marginal effects were also discussed to discover the likelihood that each variable would have a significant effect on EEA.

Table 3.1. Description of the Variables

	Variable	Description	Possible values
Dependent Variable	<i>Entrepreneurial Employee Activity (EEA)</i>	In the last three years, have you been involved in the development of new activities for your main employer?	1. Yes 0. No
	<i>Intrapreneurial Skills</i>	Do you have the knowledge, skill and experience required to start a new business?	1. Yes 0. No
Independent Variable	<i>Education</i>	GEM harmonized educational attainment	0. Secondary degree or less. 1. Post-secondary degree or higher.
	<i>Procedures</i>	In my country, it is easy to start a business.	1. Yes 0. No
	<i>Social legitimacy</i>	In my country, those successful at starting a new business have a high level of status and respect.	1. Yes 0. No
Control Variable	<i>Age</i>	What is your current age (in years)?	Continuous Data
	<i>Gender</i>	What is your gender?	1. Male 0. Female
	<i>Media Impact</i>	In my country, you will often see stories in the public media and/or internet about successful new businesses.	1. Yes 0. No

Table 3.2. Correlation Matrix and Main Descriptive Statistics

	Obs.	Mean	Std Dev.	EEA	Int. Skills	Education	Procedures	Social legitimacy	Age	Gender	Media Impact	VIF
EEA	1499	0.13	0.34	1								-
Int. Skills	1499	0.74	0.44	0.17*	1							1.2
Education	1499	0.31	0.46	0.20*	-0.08*	1						1.03
Procedures	1499	0.74	0.44	0.02	0.28*	-0.04	1					1.19
Social legitimacy	1499	0.85	0.35	-0.08*	0.07*	0.02	0.08*	1				1.02
Age	1499	33.99	9.26	0.06*	0.09*	0.10*	-0.02	0.05*	1			1.03
Gender	1499	0.65	0.48	0.19*	0.16*	0.09*	0.03	-0.03	0.07*	1		1.05
Media Impact	1499	0.83	0.38	0.11*	0.33*	-0.04	0.36*	0.09*	-0.04	0.11*	1	1.24

*p < 0.05

3.4. Results

The first model included only the control variables (age, gender and media impact). The second model tested my independent variables (intrapreneurial skills, education, procedures and social legitimacy) controlled by age, gender and media impact. The results suggest that intrapreneurial skills are positively and significantly related to EEA. The marginal effects show that if a person considers himself or herself to have the set of intrapreneurial skills to initiate new products and services, he or she is 9.5% more likely to become an intrapreneur. Therefore, the results support Hypothesis 1.

For education, the results of the test suggest that having a post-secondary degree or higher qualification also has a positive and significant effect. They show that individuals with a post-secondary degree or higher qualification are 11.8% more likely to become intrapreneurs. The results, therefore, support Hypothesis 2.

When I tested procedures in Saudi Arabia and whether or not it is easy to start a business in the region, the results suggest that the direct effect of procedures is not significant for EEA. Given the fact that procedures do not have a significant effect on EEA, the likelihood of becoming an intrapreneur and initiating new products and services in an existing organization is 2% lower. Overall, the results do not support Hypothesis 3. Social legitimacy, as an informal factor, has a negative relationship, and the marginal effect suggests that when entrepreneurs are respected in Saudi society, this discourages employees from becoming intrapreneurs. It is 7.8% less likely that an individual will become an intrapreneur in a community that respects independent entrepreneurs. Therefore, the results support Hypothesis 4.

After testing the direct effect of the variables, I focused on their moderating effect (Models 2, 3, 4 and 5). In Model 2, when I accounted for the moderating effect that procedures have on intrapreneurial skills, I noticed that procedures had a significant effect on EEA. I observed that when the procedures for setting up a company are easy (procedures = 1), the probability of EEA is reduced by, on average, 1.92%. When I investigated the interaction between intrapreneurial skills and procedures, I noticed that this moderating effect is positive and significant. This moderating effect of intrapreneurial skills along with procedures increases the likelihood of EEA to 21.9%. With all the other moderating effects, the likelihood of EEA when intrapreneurial skills = 1 is about 15.5%. This suggests that when added to the increase in the

probability of EEA given intrapreneurial skills, the effect is amplified by the ease of procedures; thus, the results support Hypothesis 5a.

In Model 4, when I accounted for the moderating effect that social legitimacy has on intrapreneurial skills, I noticed that the direct effect of social legitimacy on EEA diminishes because it moderates the relationship between intrapreneurial skills and EEA. When I investigated the interaction between intrapreneurial skills and social legitimacy, I noted that this interaction term is negative and significant. This moderating effect of intrapreneurial skills along with social legitimacy increases the likelihood of EEA to 16.2%. This suggests that when added to the increase in the probability of EEA given intrapreneurial skills, the effect is amplified by social legitimacy; thus, the results support Hypothesis 6a. However, other interactions do not show significant effects in Models 3 or 5, which means the results do not support Hypothesis 5b or Hypothesis 6b.

Table 3.3. Logistic Regression Results

	Control Model	Model 1	Model 2	Model 3	Model 4	Model 5
EEA	Coef. (Std Err)	Coef. (Std Err)	Coef. (Std Err)	Coef. (Std Err)	Coef. (Std Err)	Coef. (Std Err)
Int Skills		1.60*** (0.30)	0.68* (0.39)	1.60*** (0.30)	3.16*** (1.03)	1.61*** (0.30)
Education		1.24*** (0.17)	1.26*** (0.17)	1.07*** (0.34)	1.22*** (0.17)	1.04*** (0.38)
Procedures		-0.25 (0.20)	-2.03*** (0.68)	-0.35 (0.27)	-0.26 (0.20)	-0.24 (0.20)
Social legitimacy		-0.80*** (0.21)	-0.79*** (0.21)	-0.80*** (0.21)	0.93 (1.06)	-0.91*** (0.28)
Procedures*Int Skills			2.00*** (0.71)			
Procedures*Education				0.22		

					(0.39)	
Social legitimacy *Int						-1.87*
Skills						(1.08)
Social legitimacy						0.25
*Education						(0.42)
Age	0.01*	0.01	0.01	0.01	0.01	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Gender	1.46***	1.29***	1.32	1.29***	1.31***	1.29***
	(0.23)	(0.24)	(0.24)	(0.24)	(0.24)	(0.24)
Media Impact	1.08***	0.99***	1.12	0.98***	1.00***	0.98***
	(0.30)	(0.33)	(0.33)	(0.32)	(0.33)	(0.33)
Log Likelihood	-544.31	-494.25	-489.37	-494.09	-491.94	-494.07
Pseudo R²	0.07	0.16	0.16	0.16	0.16	0.16
Number of obs	1499	1499	1499	1499	1499	1499

*p < 0.10; **p < 0.05; ***p < 0.01.

3.5. Discussion

The results indicate that intrapreneurial skills, education and social legitimacy have significant and direct effects on EEA (Hypotheses 1, 2 and 4). They also suggest that procedures and social legitimacy moderate the relationship between intrapreneurial skills and EEA (Hypotheses 5a and 6a).

The results for Hypothesis 1 suggest that having intrapreneurial skills and the specific knowledge of how to develop new businesses and produce new products and services play significant roles in an individual becoming an intrapreneur. These skills make it easier for an employee to develop initiatives to make the organization competitive in the industry. Therefore, policymakers in emerging countries (such as Saudi Arabia) can introduce policies that encourage organizations to focus on training and knowledge transfers between employees so that the organizations can be taken to a global level (Hughes & Mustafa, 2017). At the same

time, an organization needs to invest in hiring people who have the skills and knowledge needed to match the company's strategy. In testing the relationship between intrapreneurial skills and EEA with procedures moderating the relationship, I noticed that the likelihood of EEA increased from 9.4% to 21.9% (Hypothesis 5a). When testing the relationship between intrapreneurial skills and EEA with social legitimacy moderating the relationship, I noticed that the likelihood of EEA increased from 9.4% to 15.9% (Hypothesis 6a).

In the case of Hypothesis 2, my findings suggest that an individual is more likely to develop new products and services in a company if he or she has a high level of education (Neessen et al., 2019). Becker (1993) explained that human capital refers to an individual's set of knowledge and skills, which are typically developed through investment in education and training as well as experience. My results are supported by the literature, and I suggest that people with a post-secondary degree or higher qualifications are more likely to initiate new products, services and procedures inside the companies for which they work than are less educated employees. In other words, human capital plays a significant role in the probability of EEA. In line with Becker (1993), my results show that education helps an individual to develop the skills and knowledge that would promote the initiation of new products and services. I suggest that the reason is that an individual with high human capital probably has a middle- to top-management role and will be involved in shaping the strategy of the organization moving forward. Engagement in such activity would encourage that individual to be an intrapreneur. However, when I tested the moderating effect of education, the results indicated that education still has a highly significant effect across all phases of analysis, which suggests that education plays a vital role in EEA. Education can become a key resource for promoting EEA (Chandler et al., 2005).

Hypothesis 3 posits that easier procedures to start a new business have a negative effect on EEA in Saudi Arabia; this hypothesis is not supported. The literature suggests that easy procedures help an individual to start a new business quickly and cheaply (Van Stel et al., 2007). While scholars have tested the same proxy and found significant and negative effects (Turro et al., 2014; Urbano & Turro, 2013), my findings suggest that in the case of an emerging economy such as Saudi Arabia, procedures do not have a significant and direct effect on EEA. Therefore, based on previous studies (Turro et al., 2014; Van Stel et al., 2007; Urbano & Turro, 2013), I argue that there are differences between contexts in terms of institutions, and those differences are significant for EEA. However, it is vital to mention that Saudi Arabia has been

investing heavily in electronic government services to enhance system quality, service quality and information quality. Including, but not limited to, government to business services (Santa et al., 2019). The investment that the Saudi government made in e-government met and exceeded users' expectations (Santa et al., 2019), which may be the reason why procedures do not have a significant effect on EEA. Yet, as mentioned earlier, the Saudi context is an emerging economy with a unique characteristic. Hence, future research would focus to answer the findings of this unexpected result.

Hypothesis 4 tests the effect of the social legitimacy of entrepreneurs on EEA. Society considers entrepreneurs as having a high level of income and power (Praag, 2009), which is a factor that shapes people's occupational preferences as well as their behaviour in relation to being an entrepreneur or intrapreneur (Parker & Van Praag, 2010). The hypothesis suggests that being respected as an entrepreneur has a negative and significant effect on EEA in Saudi Arabia. My results support the hypothesis by revealing that the high status of successful entrepreneurs in Saudi society discourages employees from developing new products and services in their existing organizations. Employees prefer to independently create new start-ups and push them forward to become global organizations that grab the attention of Saudi society and make the individuals more respected in the community. Modifying these social perceptions is a complex task, and the presence of clear role models along with media attention on entrepreneurial stories inside established companies could contribute to the acknowledgement of EEA and make it more visible (Lounsbury & Glynn, 2001).

My results do not support Hypotheses 5b and 6b. The moderating effect of procedures and social legitimacy on the relationships between education and EEA is not significant. Employee training and the development of entrepreneurial capacities are widely considered to be key elements for entrepreneurial employee initiatives; however, it remains unclear how these competences might be nurtured in practice (Byrne et al., 2016). My findings imply that the quality of regulations and the social prestige of entrepreneurial activities do not modify the extant positive relation between higher education and the likelihood of engaging in EEA. In the next section, I elaborate on how this unexpected finding could be explored in future research.

My results have both theoretical and practical implications. With respect to theoretical impact, studying the effect of individuals' intrapreneurial skills and educational level on EEA helps us to better understand how individuals in organizations act with respect to, and how they react

to, this phenomenon. In addition, understanding the direct and moderating effects of formal and informal institutions on the relationship between intrapreneurial skills, education and EEA extends our knowledge about the antecedents of EEA (Aidis et al., 2008; Antoncic, 2007; Arenius & Kovalainen, 2006; Arenius & Minniti, 2005; Benitez-Amado et al., 2010; Bosma et al., 2004; Javalgi & Todd, 2011; Miller, 1983; Pinchot, 1985; Ribeiro Soriano et al., 2012; Schollhammer, 1982; Turro et al., 2020; Urbano & Turro, 2013). Hence, the results contribute to the call for research on the combined effects of formal and informal institutions within a particular context (Dikova et al., 2010; Hayton et al., 2002). I show that context matters for intrapreneurial behaviours and that the role of this context may be different in emerging economies as compared to the traditional Western contexts. I contribute by showing that the effect of some of these antecedents (procedures and social legitimacy) could be different in Saudi Arabia as compared with Western countries where most of the research on entrepreneurship is performed. For example, Turro et al. (2014) examined 62 different countries to determine the effect that the number of procedures necessary to start a new business has on entrepreneurial employees and found a direct and significant effect. In my analysis, I found that procedures do not have a significant direct effect on the probability of becoming entrepreneurial employees in Saudi Arabia, although they still moderates the effect between intrapreneurial skills and EEA. Overall, my findings are in line with Hughes and Mustafa (2017), who argued that the organizational environment in emerging economies is “much more nuanced, interactive and complex than currently presented in Western treatments and studies” (Hughes & Mustafa, 2017, p. 137).

From a practical perspective, my findings allow policymakers in the context of Saudi Arabia to obtain some insights into, and a better understanding of, the intrapreneurial behaviour of the Saudi population. For Saudi Arabia to move from an oil-based to a knowledge-based country, the government should thoroughly understand the population’s behaviour. Enhancing the performance of existing firms in the region would contribute towards achieving the region’s target, one major part of which is diversifying the total revenue in what the Saudi government calls “Vision 2030”. The Saudi government has accomplished a decent level in the promotion of independent entrepreneurship (Abu Bakar et al., 2017). However, my results show that when the Saudi community respects independent entrepreneurs, employees working in organizations will try to deploy their business ideas as start-ups outside the organizations for which they work. Therefore, policymakers and company managers may activate initiatives that highlight and explicitly recognize key employees that helped their organizations scale up and grow.

In addition, scaling up an existing business requires employees to put effort and creativity into helping their organization reach a global level, meaning that managers and high-level managers can benefit from the results of my study. As mentioned by Frank et al. (2016), human resources can be considered as intrapreneurship-enabling factors in organizations. This study contributes to human resources activities in terms of designing pieces of training and capacity building among existing employees. For example, this study sheds some light on the importance of intrapreneurial skills and education in activating EEA in the context of an emerging economy. It also helps in understanding what motives – for example, social legitimacy – ignite employees' desires to contribute to intrapreneurial activities.

3.6. Conclusion

The analysis of 1,499 responses from the GEM data for 2016 in the context of Saudi Arabia has allowed me to explore the determinants of EEA using human capital and institutional economics. My results suggest that intrapreneurial skills, education and social legitimacy play significant roles in EEA, procedures do not have a significant direct effect on EEA, and procedures and social legitimacy moderate and reinforce the effect of intrapreneurial skills on EEA. In other words, high skill levels and the possession of a post-secondary degree increase the likelihood that an employee will engage in EEA, and the respect given to independent entrepreneurs in the Saudi community decreases the probability that an employee will promote EEA. Overall, the results emphasize the importance of environmental factors since they have a direct and moderating effect. In addition, in the case of an emerging economy such as Saudi Arabia, the role of these environmental determinants is different from that suggested in previous literature (which focuses mostly on Western economies).

Finally, I suggest some limitations and future research lines. First, this study uses a binary dependent variable that broadly defines the EEA phenomenon. The dependent variable employed was created by the GEM project precisely to gauge entrepreneurial employee behaviour. In addition, several other studies have used this type of data to analyse entrepreneurial activities (Aidis et al., 2008; Alvarez & Urbano, 2011; Arenius & Kovalainen, 2006; Arenius & Minniti, 2005; Djankov et al., 2002; Turro et al., 2014; Urbano & Turro, 2013; Van Stel et al., 2007). However, future research could focus on other more specific

aspects of EEA (e.g. risk-taking capability, strategic renewal behaviour or innovativeness) and evaluate whether the role of its determinants differs. Second, I used binary variables to account for complex factors; although this approach has been extensively used in previous research (De Clercq et al., 2013), future studies should try to use variables that more accurately capture these factors. Third, the GEM data set I used did not include proper firm-level controls (such as industry or firm size), and I suggest that this type of variable that may influence EEA should be included in further research. Fourth, I did not find a significant moderating effect of procedures and social legitimacy on the relationship between education and EEA. Future research could explore the extent to which other factors not included in my study condition this finding. For instance, this relation could be affected by the specific type of education received (i.e. specific training in entrepreneurship and innovation vs other types of training, or having a degree in business and management vs degrees in other areas of study). Similarly, other factors could influence this unexpected finding, such as the specific sector in which the entrepreneurial activities take place (Colombo & Grilli, 2005) or the types of previous experience intrapreneurs have (Guerrero & Peña-Legazkue, 2013).

Chapter 4

4. EFFECTS OF WORK ATMOSPHERE FACTORS ON TWO FORMS OF CORPORATE ENTREPRENEURSHIP: INTERNAL CORPORATE VENTURING AND STRATEGIC ENTREPRENEURSHIP

4.1. Introduction

It was mentioned in Chapter 2 that corporate entrepreneurship refers to entrepreneurship activities inside the organizational borders. In this chapter, I look in greater depth at this phenomenon. Therefore, “corporate entrepreneurship encompasses two types of phenomena and the processes surrounding them: (1) the birth of new businesses within existing organizations, i.e. internal innovation or venturing; and (2) the transformation of organisations through the renewal of the key ideas on which they are built, i.e. strategic renewal” (Guth & Ginsberg, 1990, p. 5). Strategic entrepreneurship (SE) and internal corporate venturing (ICV) are vital for organizational performance as well as economic development (Covin & Miles, 1999, 2007; Guerrero & Peña-Legazkue, 2013; Hitt, Bierman, et al., 2001; Hornsby et al., 2009; Kuratko et al., 2001; Ma, Liu, et al., 2016; Morris et al., 2010; Neessen et al., 2019; Wiedeler & Kammerlander, 2019; Zahra, 2015; Zahra & Covin, 1995).

SE enhances the performance of firms by seeking opportunities that add value to customers and wealth to business owners (Hitt et al., 2011); however, it takes time to reflect on financial performance (Kuratko & Audretsch, 2009). ICV improves organizational performance by bringing new products and services to the market, thereby gaining sustainable competitive advantage (Burgers et al., 2009). In this regard, the work atmosphere has a fundamental role in CE forms. When organizations create a work atmosphere that encourages certain activities aimed at activating CE in general, employees engage in those CE activities that improve the efficiency and the performance of the organization. Organizations and job positions where work atmospheres embrace an intrapreneurial mindset, leadership, entrepreneurial management of organizational resources, the application of creativity and the development of innovation enhance the spirit of SE (Hitt, Ireland, et al., 2001) and ICV (Kuratko et al., 2009) and therefore achieve a higher number of innovative products and processes (Khazanchi et al., 2007). In addition, research has defined basic organisational arrangements to create environments that support different forms of CE (Hornsby et al., 2009; Kuratko et al., 2004, 2005).

Yet, research tends to believe that certain work atmospheres can be beneficial to CE in general (Jong et al., 2015), without taking into consideration the fact that CE can have different forms and that these forms have different processes and outcomes (Guth & Ginsberg, 1990). Developing entrepreneurial strategies inside organizations without understanding the effects that work atmosphere has on each form of CE would hinder forming a proper entrepreneurial structure to build upon. For example, if a company is looking to produce new products for the market, they should utilize ICV but not SE, because SE capitalizes on opportunities but does not necessarily execute them (Kuratko & Audretsch, 2009). Failing to understand the differences between those two forms of CE would obstruct companies' leaders to build upon a proper CE form. Neessen et al. (2019) performed an extensive literature review and viewed more than 1,200 articles from the period 1980 to 2017. Yet, they stated that the CE literature is "in need of an integrated overview of the characteristics and behaviours of CE" (Neessen et al., 2019). Studies of employees' behaviours in organizations are emerging, and yet there are still gaps in the literature that can be addressed (Jong et al., 2015). Accordingly, in this chapter, I aim to analyse how different factors of the work atmosphere affect different forms of corporate entrepreneurship (strategic entrepreneurship and internal corporate venturing).

Based on previous literature, I have defined four factors that represent the work atmosphere, namely access to resources (Hitt et al., 2002; Huang, 2001; Ireland et al., 2003), management support (Antonicic, 2007; Sebora & Theerapatvong, 2010), procedural steps (Begley et al., 2005; Van Stel et al., 2007) and colleagues' support (Cohen & Levinthal, 1990; Floyd & Wooldridge, 1999; Hitt, Ireland, et al., 2001). I use dynamic capabilities as a framework to examine how work atmosphere factors affect different forms of CE (Teece et al., 1997). Dynamic capabilities are defined as "the abilities to reconfigure a firm's resources and routines in the manner envisioned and deemed appropriate by the firm's principal decision-maker(s)" (Zahra et al., 2006). By doing so, I extend the knowledge about CE by identifying how work atmosphere factors affect different forms of CE, which in this study are SE and ICV. To achieve my research objective, I collected data using an online survey targeting employees in the context of Saudi Arabia. This context has been going through enormous changes since the government announced its intention to depend less on oil and more on knowledge to diversify its total revenue streams (Alrashidi & Phan, 2015). In this regard, the context provides opportunities for the general public to contribute to developing the economy to move forward to a more flourishing future (Khan, 2020). Therefore, I targeted employees from Saudi Arabia

since they are being encouraged to develop more products and services, whereby they are participating in several forms of CE.

This chapter has two main contributions. First and foremost, I take one more step toward understanding the effect that work atmosphere has on different forms of CE. Previous research has shown that all four work atmosphere factors have a significant effect on SE and ICV (Begley et al., 2005; Hitt et al., 2002; Huang, 2001; Ireland et al., 2003; Kuratko et al., 2009). However, the knowledge concerning the dissimilar effect of work atmosphere factors on different forms of corporate entrepreneurship is lacking in previous literature. Filling this gap would advance the knowledge of CE in general, and more precisely enhance the vision of CE forms. Therefore, I investigate and compare the work atmosphere factors that are affecting SE and ICV. Second, understanding how work atmosphere factors affect different forms of CE would help upper teams' managers/supervisors to create environments that support their strategic goals. In addition, policymakers and board members can take advantage of this study to design work atmospheres and draw up policies and procedures that enhance SE and ICV, which could be beneficial for the economy at large (Hitt, Ireland, et al., 2001; Sharma & Chrisman, 2007).

After the introduction, the chapter is structured as follows. CE literature is presented along with hypotheses. In the methodology section, details are provided on data description, measures, validity and reliability, and analysis technique. Results and a discussion follow in the next section. Finally, a conclusion and a future research agenda are presented.

4.2. Theoretical background

Many terms have been used to describe the CE phenomenon, and they share very similar meanings. The terms I found include "intrapreneurship" (Duncan et al., 1988), "corporate entrepreneurship" (Guth & Ginsberg, 1990), "corporate venturing" (Vesper, 1990) and "internal corporate entrepreneurship" (Schollhammer, 1982). Also, I found many definitions that explain CE. However, I stand by Sharma and Chrisman (2007) when they define CE as a "process wherein 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".

In this study, my focus is directed toward two forms of CE, namely SE and ICV. Ireland et al. (2001) and Hitt et al. (2001) developed the SE concept when they integrated entrepreneurship

and strategic management theory. SE refers to those activities that seek market opportunities and competitive advantages to create wealth (Ireland et al., 2003). Kuratko and Audretsch (2009) viewed SE from different yet relative perspectives: strategic management, entrepreneurship and economic policy. They concluded that SE comprises processes concerned with firm performance and related to long-term goals and market orientation rather than short-term success (Kuratko & Audretsch, 2009). SE mainly aims to capitalize on ideas but not necessarily to execute them (Hitt et al., 2011).

However, ICV is “the creation of organizational entities that reside within an existing organizational domain” (Sharma & Chrisman, 2007, p. 9). Ma et al. (2016) suggested that ICV has a significant role in heated competitive markets that require innovations and new products and services as of today. ICV advances firms’ performance by creating a sustainable competitive advantage and persistent high-class performance (Ma, Liu, et al., 2016). ICV aims mainly to create new entities from existing organizations (Kuratko & Audretsch, 2009; Sharma & Chrisman, 2007).

In general, CE not only stands for idea creation, it requires to “champion ideas from development to complete profitable reality” (Rigtering et al., 2019). To champion those ideas, dynamic capabilities have to be monitored at a high level (Wu, 2007). As mentioned before, dynamic capabilities can be described as “the abilities to reconfigure a firm’s resources and routines in the manner envisioned and deemed appropriate by the firm’s principal decision-maker(s)” (Zahra et al., 2006). It is how organizations structure, combine and recombine their resources, such as employees and facilities, to generate new value-creating strategies (Grant, 1996). Dynamic capabilities focus on strategic change and associate an organization with the environment (Zahra et al., 2006), which is vital for initiating and maintaining SE (Hitt, Ireland, et al., 2001) and ICV (Sharma & Chrisman, 2007) in organizations. Also, the effectiveness, speed and efficiency – which are known as characteristics of the work atmosphere – of organizations depend on the level of dynamic capabilities of the firm (Chmielewski & Paladino, 2007). Top management, middle managers and low-level managers play a vital role in dynamic capabilities and receive special attention in terms of dynamic managerial capabilities (Adner & Helfat, 2003; Lee & Teece, 2013). Therefore, in this chapter, I analyse two forms of CE and work atmosphere factors in light of dynamic capabilities.

A work atmosphere with an entrepreneurial mindset, leadership, management of organizational resources, the application of creativity and the development of innovation are vital for

activating SE in a given organization (Hitt, Ireland, et al., 2001). In addition, a work atmosphere that applauds intrapreneurial actions also plays a major role in order for ICV to progress in firms (Abrell & Karjalainen, 2017; Guerrero et al., 2019; Katz & Gartner, 1988; Keil et al., 2009; Rotefoss & Kolvereid, 2005). Organizations with an intrapreneurial work atmosphere achieve a higher number of innovative products and processes (Khazanchi et al., 2007); thus, ICV activities start to activate (Floyd & Wooldridge, 1999). Therefore, firms with previously identified characteristics effectively survive and grow (Autio et al., 2000; Newman, 2000).

Following previous literature (Antoncic, 2007; Begley et al., 2005; Cohen & Levinthal, 1990; Hitt, Ireland, et al., 2001; Huang, 2001; Ireland et al., 2003; Kuratko, Hornsby, et al., 2014; Sebora & Theerapatvong, 2010; Van Stel et al., 2007), I define four factors of work atmosphere that motivate intrapreneurial actions. Those factors are access to resources (Hitt et al., 2002; Huang, 2001; Ireland et al., 2003), management support (Antoncic, 2007c; Kuratko, Hornsby, et al., 2014; Sebora & Theerapatvong, 2010), procedural steps (Begley et al., 2005; Kuratko, Hornsby, et al., 2014; Van Stel et al., 2007) and colleagues' support (Cohen & Levinthal, 1990; Floyd & Wooldridge, 1999; Hitt, Ireland, et al., 2001).

Access to resources

Organizational resources, such as financial and social resources, play a vital role in supporting the level of SE and ICV in a given organization (Debrulle et al., 2020, Hitt et al., 2002; Ireland et al., 2003; Kuratko et al., 2009). Organizational resources are those resources that the company owns and controls, such as social, financial and technological resources (Turro et al., 2013). Organizations seeking growth engage in SE (Ireland et al., 2003) and ICV (Burgelman, 1984) by profiting from existing resources to grow new capabilities (Kuratko et al., 2009). Providing resources for employees encourages creativity and innovations, and enhances personal performance with a view to gaining competitive advantage (Huang, 2001). Therefore, management should learn how to acquire, bundle and make those resources available for employees to achieve competitive advantage (Chen, 1995; Sirmon et al., 2007).

Tangible (such as financial) and intangible (such as human) resources are key elements for engaging in SE (Ireland et al., 2003). Yet, financial resources are less important than human and social resources in SE (Hitt et al., 2011). As explained earlier, SE capitalizes on ideas but does not necessarily execute them (Kuratko & Audretsch, 2009). However, along with social, human and asset resources, “financial capital is often crucial for acquiring or creating the

resources necessary to exploit opportunities” (Hitt et al., 2011, p. 62). Exploiting opportunities is the main activity for ICV (Ma, Liu, et al., 2016) but not in SE (Kuratko & Audretsch, 2009). One of the key motives for firms to engage in ICV is the availability of uncommitted financial resources, which allow firms to take risks (Kuratko et al., 2009). Kuratko et al. (2009) also pointed out that receiving the necessary (financial and non-financial) resources is associated with the growth performance of a new venture. Therefore, since SE does not necessarily result in the creation on new products and services, which is not the case in ICV, I argue that resources are more important to ICV than it is to SE. Hence, I propose the following hypothesis:

Hypothesis 1: Access to resources has a significant and positive effect on both SE and ICV; this effect is greater on ICV.

Management support

Sebora and Theerapatvong (2010) found that management support is proactive when organizations have an entrepreneurial work atmosphere. Management support plays a vital role in individuals’ willingness to take risks and capitalize upon ideas and opportunities (Urbano & Turro, 2013). On the one hand, Ireland et al. (2003) indicated that when employees recognize managers’ acts such as encouraging risk taking, promoting learning, expecting new ideas and creativity, and supporting opportunity/advantage-seeking behaviours, they will become motivated to generate ideas and develop new products and processes. However, on the other hand, overidentification of the current competitive domain weakens organizations’ ability to capitalize upon opportunities outside their current competitive domain, which weakens SE activities (Mael & Ashforth, 1995). As a result, it will drive the entrepreneurial attentions from SE orientation to opportunities in the current market direction (Withers et al., 2018). Also, as argued earlier, ICV mostly are being enforced by upper management, which indicate that management support is greater in ICV than it is in SE.

Yet, management support acts differently through different forms of CE. As mentioned before, ICVs must develop new products and services for the parent firms (Simon et al., 1999). However, SE generally capitalizes on novel ideas and solutions but does not necessarily execute them (Kuratko & Audretsch, 2009). Also, managers have a great mediating impact on the availability of resources to new business opportunities (Ndofor et al., 2011). Since ICVs implement new products and services, I argue that top management would provide more support to ICVs than to employees who generate new ideas that may or may not be executed,

which is the case in SE. “One of the strongest correlates of venturing success is the level of top management support given to the venture” (Kuratko et al., 2009, p. 464). Moreover, managers tend to balance their employees’ behaviours in terms of innovation and regular tasks to keep their managerial jobs on track (Abrell & Karjalainen, 2017). If ICVs are being encouraged in an organization, upper management would consider activities related to building new ventures as regular tasks (Begec and Arun, 2020). Hence, I propose the following hypothesis:

Hypothesis 2: Management support has a significant and positive effect on SE and ICV; this effect is greater for ICV.

Procedural steps

A negative internal climate in organizations, such as complicated procedural steps, can discourage employees from developing new products and processes, which are key to company performance (Begley et al., 2005). SE refers to those activities with long-term goals inside organizations (Kuratko & Audretsch, 2009). To reduce decision-making uncertainty, large organizations develop policies and procedures to outline decision-making duties (Meuleman et al., 2009). As explained earlier in this chapter, SE refer to activities that capitalize on business ideas but not necessarily execute those ideas. This indicates that SE activities under the umbrella of large organizations’ climate suffer from having decision-making processes and procedures that in many cases are complicated. Yet, research suggest that organisations should restructure firms’ procedures to speed up the implementation of innovative business ideas (Zahra, 1991), improve communication (Hitt et al., 2002), and create internal systems that are helpful and novel (Ireland et al., 2001).

However, ICV refer to those new ventures that reside from the parent firm and be managed separately (Sharma and Chrisman 2007). Diversified corporation governance tends to structure divisional managerial arenas and fuel them with incentives and rewards, leading to the existence of buy-out opportunities (Wright et al., 1991). This indicates that procedures and policies are mostly developed in smaller-size businesses, which means easier and more flexible procedural steps. Van Stel et al. (2007) suggested that easing procedures encourages the building of new ventures. In other words, SE activities are presented in a climate that follows the structure of organizational procedures, while ICV activities are present in a climate that is designed for its need. Hence, in light of this argument, I propose the following hypothesis:

Hypothesis 3: Procedural steps have a significant and negative effect on SE and ICV; this effect is greater for SE.

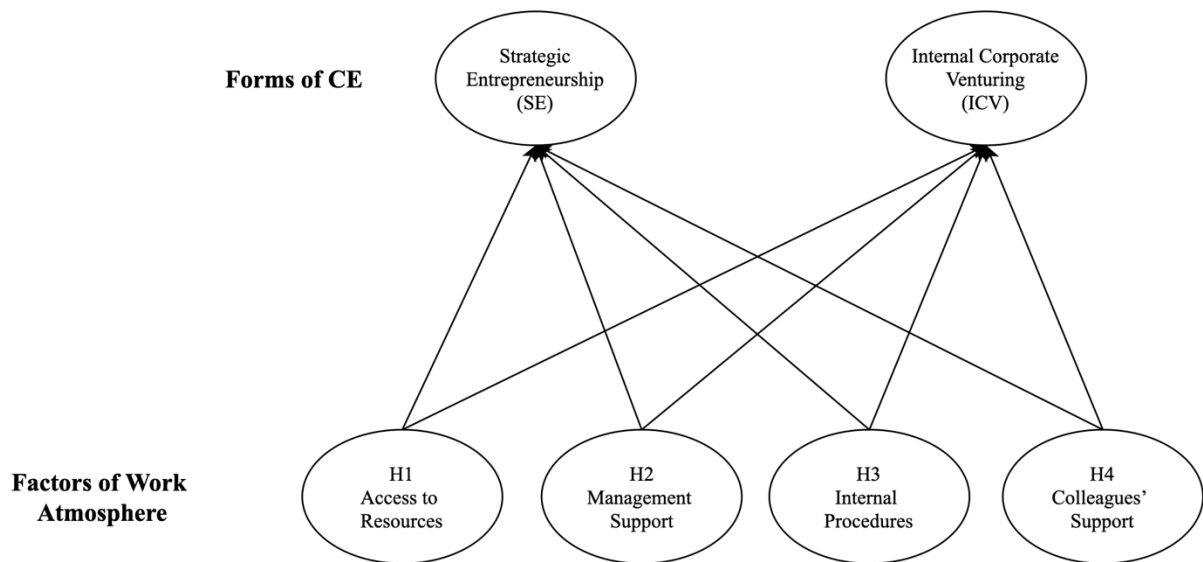
Colleagues' support

Upper management should encourage acts that enhance knowledge sharing and interpersonal harmony among employees (De Clercq et al., 2016) to improve the SE and ICV in a given organization. SE refers to those activities that make the most of business ideas but do not necessarily implement them (Kuratko & Audretsch, 2009). Hitt, Ireland, et al. (2001) found that transferring knowledge among colleagues within the firm enhances human capital, and that contributes to SE. Employees who recognize problems and generate novel solutions usually seek colleagues' support at early stages to capitalize on those opportunities (De Clercq et al., 2016). For example, Bakker and Demerouti (2007) stressed that when employees have innovative and novel ideas, they can benefit from other employees' knowledge to avoid energy-consuming activities that might distract them from building up their opportunities. Colleagues' support reduces the stress that employees experience by giving novel feedback and suggestions on how to move through these stressful conditions (Cohen & Levinthal, 1990; Floyd & Wooldridge, 1999).

Simon et al. (1999) concluded that ICV requires the creation of new entities. Organizations usually design training programmes to enhance employees' acceptance and openness to being involved with their colleagues in establishing new ventures (Abrell & Karjalainen, 2017). Those training programs indicate that organizations' leaders try to encourage colleagues' support for establishing new ventures. However, it must be borne in mind that having colleagues' acceptance might be challenging, especially if they are going to experience conflict between regular tasks that are assigned by their upper managers and new venture tasks (Abrell & Karjalainen, 2017). In addition, managers tend to balance their team members between innovation and regular tasks, but they focus more on maintaining a competitive position and profitability (Ndofor et al., 2011), which usually disengage employees from becoming more innovative and supportive. Consequently, employees will avoid supporting each other to focus on their regular tasks. Therefore, when an idea is ready to be executed or proven to have high success potential, and can be considered ready for ICV, employees turn their focus toward trying to attain upper management support rather than colleagues' support (Ma, Liu, et al., 2016). Accordingly, I assume that colleagues' support has a greater effect on SE than on ICV.

Hypothesis 4: *Colleagues' support has a significant and positive effect on SE and ICV; this effect is greater for SE.*

Figure 4.1. Conceptual Framework



4.3. Methodology

Data

My data was collected using an online survey that targeted employees working in various private, government and semi-private organizations from different regions in Saudi Arabia. Saudi Arabia is one of the major regional and global economic power. The main revenue that empowers the Saudi context is oil production. However, there is a growing realization that the government can no longer meet its commitment to the general population, including government employees and the private sector (Hertog, 2013). So, the government has made clear its intention to diversify its total income, depend less on oil and rely more on knowledge-based revenue (Alrashidi & Phan, 2015). Therefore, small and medium organizations are being encouraged to develop products and services to contribute to the development of the current economy (Khan, 2020). In addition, from a social perspective, the context is going through fundamental social changes in several terms, e.g. gender equality (Khan, 2020). Therefore, organizations within the context are being encouraged to contribute to growing the economy and to develop more products and services. Consequently, more employees are participating in different forms of CE.

Based on previous research, I developed a survey where the questions have been structured in themes, with each theme representing a variable, either a dependent, an independent or a

control variable (see Table 4.2). After developing the survey, all questions used were translated from English into Arabic using the forward-backward translation method (Behling & Law, 2000).

The online survey had four levels of development. First, after developing the survey, I sent it to ten individuals from my professional network, i.e. scholars, executives, managers and entry-level employees, as a pilot. Second, I conducted short interviews with each individual through video calls to ensure they understood the questions and whether or not responses were available in the survey. Third, I adjusted some linguistic issues, since the online survey was in the Arabic language, and send it back to another ten individuals with the same characteristics as in the previous sample. Finally, after confirming the clarity of the survey, I sent the questionnaire to firms from eastern, western, northern, southern and central regions of Saudi Arabia. I used online software to collect data. The link was sent via email to each organization. Next, organizations that received the link distributed it to internal employees through emails. After four weeks, a reminder email was sent to some organizations. The total number of links sent reached 4,328 employees. I received 313 responses, making the response rate 7.23% (see Table 4.1).

Table 4.1. Sample Demographics

Gender		Age		Education level		Type of organization	
Male	70.7%	< 20	0.6%	High school	3.6%	Public	32.5%
Female	29.3%	20–29	12.5%	Bachelor	49.6%	Semi-Government	15.8%
		30–39	55.6%	Masters	31.9%	Private	49.6%
		40–49	26.5%	Doctorate	12.8%	Non-profit	2.1%
		> 50	4.8%	Other	2.1%		

Measures

For the first part, personal information and company-related information were requested from participants. The information I asked for from participants was related to organization size, education, region, industry, work hierarchy, local/international, organization type, marital status, gender and age. For industry, I asked participants what industry their organisation work in. For the work hierarchy, I asked participants if they were executives, middle managers or juniors. For local/international, I asked participants whether they worked in a local or

international organization. For company type, I asked participants if they worked in a private, government, semi-government or non-profit organization. It has been common in previous researches to use those questions (Arend, 2014; Hitt et al., 2011; Minniti & Nardone, 2007; Murphy et al., 2019; Titus et al., 2017). Accordingly, I controlled my analysis using the aforementioned variables. In the second part, participants were provided with statements testing their level of agreement, using a five-point scale (1 = strongly disagree, 5 = strongly agree), about SE. Those statements were extracted from previous studies (Covin & Miles, 1999; Guerrero & Peña-Legazkue, 2013; Hitt, Bierman, et al., 2001; Hornsby et al., 2009; Kuratko et al., 2001; Neessen et al., 2019). A sample item is “You can enhance processes of workflow where you work or used to work at”. In the third part, participants provided their level of agreement, using a five-point scale (1 = strongly disagree, 5 = strongly agree), about statements that represent ICV extracted from previous studies (Covin & Miles, 2007; Ma, Liu, et al., 2016; Morris et al., 2010; Wiedeler & Kammerlander, 2019; Zahra, 2015; Zahra & Covin, 1995). A sample item is “Your company introduces new products/services in the market”. In the fourth part, participants were provided with statements to test their level of agreement, using a five-point scale (1 = strongly disagree, 5 = strongly agree), about work atmosphere obtained from previous studies (Antoncic & Hisrich, 2001; Hornsby et al., 2002; Kuratko et al., 1990; Miller & Friesen, 1982; Schuler, 1986; Yang & Wang, 2014). A sample item of procedural steps is “You will (personally) go through a lot of procedures to deploy the ideas that you have in the organization that you work for” (see Table 4.2).

Validity and reliability

To test the reliability of my data, I used multiple methods. First, due to the self-report nature of my data, I tested common method bias (CMB), which uses exploratory factor analysis (EFA). In the CMB test, single factors were loaded to describe the measurement error that is compounded by the sociability of respondents who want to provide positive answers (Chang et al., 2010). Data with a CMB value of less than 0.5 are considered to be adequate (Podsakoff et al., 2003). Second, I used the Kaiser-Meyer-Olkin (KMO) test and Bartlett’s Test of Sphericity (BTS) to test the adequacy of my data set and correlation between items. Hair et al. (2010) suggest that a KMO value above 0.60 and a BTS significance rate of 5% and greater are considered to be adequate. Furthermore, I tested the variance inflation factor (VIF) to ensure that my data set does not have a significant effect in terms of multicollinearity issues in my analysis. Craney and Surles (2002) suggest that since there is no formal cut-off value of

VIF that indicates whether the variance coefficient is too large, less than 5 or less than 10 is considered to be acceptable. Finally, I evaluated Cronbach's alpha to measure the reliability of the scale I used in my analysis. An alpha with a value of more than 0.7 is considered to be adequate (Nunnally, 1994).

Data analyses

Given the nature of my latent dependent variables (SE and ICV), I used multiple linear regression (MLR), which has been widely used in previous empirical papers (Morianio et al., 2014). This analysis technique allowed me to identify the behaviours of work atmosphere factors associated with SE and ICV. I observed the statistical significance, the size of the effect and the standard error using MLR. I developed two models: the SE model and the ICV model. Then I used the mean score of three items to predict the SE variables and the mean score of another three items to predict the ICV variable. The SE and ICV variables were the dependent variables for the MLR analysis. The independent variables were the same in both models, including the four variables representing work atmosphere, to identify the cross effects and the size of the effects of work atmosphere factors on SE and ICV.

Table 4.2. Description of Variables

	Variable	Description and database	Possible values	References	
Dependent Variables (Forms of CE)	<i>Strategic Entrepreneurship (SE)</i>	<ul style="list-style-type: none"> - You can enhance processes of workflow where you work or used to work at. - There are opportunities in your organization where you can develop innovative processes for your employer. - You take the initiative to develop innovative processes for your employer. 	1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree	Covin and Miles, 1999; Guerrero and Peña-Legazkue, 2013; Hitt, Bierman, et al., 2001; Hornsby et al., 2009; Kuratko et al., 2001; Neessen et al., 2019	
	<i>Internal Corporate Venturing (ICV)</i>	<ul style="list-style-type: none"> - There are opportunities in your field where you can develop new products or services for customers. - Your company introduces new products/services in the market. - Your company introduces existing products/services (but new to the firm) to the market. 		Covin and Miles, 2007; Ma, Liu, et al., 2016; Morris et al., 2010; Wiedeler and Kammerlander, 2019; Zahra, 2015; Zahra and Covin, 1995	
Independent Variables (Factors of the work atmosphere)	<i>Access to Resources</i>	- You will receive support (i.e. financial resources) to develop new products or services from your boss or top management in the organization where you work.			Antoncic and Hisrich, 2001; Hornsby et al., 2002; Kuratko et al., 1990; Miller and Friesen, 1982; Schuler, 1986; Yang and Wang, 2014
	<i>Management Support</i>	- Your manager encourages you to develop new products or services.			
	<i>Procedural Steps</i>	- You will (personally) go through a lot of procedures to deploy the ideas that you have in the organization that you work for.			
	<i>Colleagues' Support</i>	- Your co-workers will help you to develop new products, services or processes inside the organization where you work.			

<p>Control Variables</p>	<p><i>Organization size, education, region, industry, work hierarchy, local/international, organization type, marital status, gender, age</i></p>	<p>Participants were asked about information related to the individual and the company where he/she worked. Those questions were asked in other related researches mentioned in the reference columns.</p>	<p>Multiple options</p>	<p>Arend, 2014; Hitt et al., 2011; Minniti and Nardone, 2007; Murphy et al., 2019; Titus et al., 2017</p>
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4.4. Results

First, as shown in Table 4.4, some variables may have a high correlation. Gujarati (2003) suggests that multicollinearity problems can be asserted when the correlation exceeds 0.80; however, the highest correlation in my analysis did not exceed 0.69. Nevertheless, due to the self-report nature of my data, I used CMB (Chang et al., 2010) and results show the CMB value is 39.88%. Also, I performed KMO and BTS to test the adequacy of my data set and the correlation between items (Hair et al., 2010). The results suggest 0.84 and $p = 0.00$, respectively. In addition, I investigated VIF to ensure that my data set did not have a significant effect of multicollinearity issues in my analysis (Craney & Surles, 2002). The results of VIF analysis suggest the mean is 1.49, the highest is 2.39 and the lowest is 1.07. Finally, I used Cronbach's alpha to measure the reliability of the scale I used in my analysis (Nunnally, 1994); the Cronbach's alpha coefficient is 0.85. Table 4.3 shows a summary of the validity and reliability measures of my tests, along with the cut-off value suggested by previous research. Therefore, I consider my data to be adequate and that they do not have a significant effect on multicollinearity issues.

Table 4.3. Validity and Reliability Measures

Test	Result	Cut-off value	Source
CMB	0.40	< 0.50	Podsakoff et al., 2003
KMO	0.84	> 0.60	Hair et al., 2010
BTS	0.00	< 0.05	Hair et al., 2010
VIF	Max. 2.39, Min. 1.07	< 5 or < 10	Craney and Surles, 2002
Cronbach's alpha	0.85	> 0.70	Nunnally, 1994

After confirming the adequacy of my data and the goodness of fit of my models, I used MLR (see Figure 4.1) to calculate the standard coefficient (β) of the interrelations among variables, the statistical significance for the hypothesis (p-value) and the standard error. I used STATA 13 software as a statistical tool. In my analysis, SE and ICV were dependent variables, and work atmosphere factors (represented by the following indicators: access to resources,

management support, procedural steps and colleagues' support) served as independent variables for both SE and ICV to test the cross effect and the size of the effect on both dependent variables.

In the analysis of my model (see Table 4.5), I aimed to test work atmosphere factors that can influence forms of CE. Therefore, I tested four different, yet relevant, work atmosphere factors and their effect on SE and ICV, which are fundamental forms of CE. Those work atmosphere factors are access to resources, management support, procedural steps and colleagues' support. The results suggest that access to resources has a positive and significant effect (at 1%) on SE and a positive and significant effect (at 1%) on ICV. So the results support Hypothesis 1 in terms of statistical significance; however, the size of the effect is similar for both ICV and SE. Therefore, the results partially support Hypothesis 1. Management support has a positive and significant effect (at 10%) on SE and a positive and significant effect (at 5%) on ICV. However, I found that management support has a greater effect on ICV than on SE by 2%. Therefore, the results support Hypothesis 2. Procedural steps have a negative and significant effect (at 1%) on SE and a negative and significant effect (at 1%) on ICV, yet procedural steps have less of an effect on ICV than on SE by 15%. Therefore, the results support Hypothesis 3. Colleagues' support has a positive and significant effect (at 1%) on SE and a positive and significant effect (at 10%) on ICV. However, colleagues' support has less of an effect on ICV than on SE by 11%. Therefore, the results support Hypothesis 4.

Table 4.4. Main Descriptive Statistics, Correlation Matrix and Multicollinearity Test

	Mean	Std Dev.	SE	ICV	AR	MS	IP	CLS	CMS	ED	RG	ID	WP	L/I	CT	ST	GN	AG	VIF
SE	3.87	1.45	1.00																1.77
ICV	3.50	1.32	0.48*	1.00															1.69
Access to resources	3.36	1.12	0.52*	0.53*	1.00														2.39
Management support	3.57	1.12	0.47*	0.46*	0.68*	1.00													2.22
Procedural steps	2.19	0.91	-0.35*	-0.27*	-0.16*	-0.28*	1.00												1.25
Colleagues' support	3.62	0.94	0.42*	0.35*	0.43*	0.40*	-0.23*	1.00											1.39
Organisation Size	2.05	1.29	-0.23*	-0.17*	-0.21*	-0.19*	0.09	-0.18*	1.00										1.20
Education	1.53	0.80	-0.03	-0.11*	-0.06	-0.09	-0.00	0.06	0.22*	1.00									1.65
Region	1.11	0.97	-0.09	-0.17*	-0.08	-0.10	-0.01	-0.07	0.04	-0.04	1.00								1.07
Industry	7.84	4.63	0.09	0.01	0.06	-0.03	0.09	0.03	-0.11*	-0.23*	0.10	1.00							1.22
Work hierarchy	2.33	1.92	0.04	0.00	0.03	0.05	-0.04	0.03	0.05	0.53*	0.03	-0.34*	1.00						1.66
Local/international	0.13	0.34	0.02	0.01	0.02	0.02	0.09	0.02	0.06	-0.07	0.10	0.13*	-0.20*	1.00					1.09
Organisation type	0.88	0.94	-0.17*	-0.17*	-0.14*	-0.04	0.07	-0.07	0.21*	0.38*	0.03	-0.19*	0.36*	-0.14*	1.00				1.35
Marital status	0.74	0.44	-0.02	0.13*	0.07	-0.03	-0.02	0.03	0.12*	0.11*	0.02	-0.01	0.10	-0.03	0.08	1.00			1.34

Gender	0.69	0.46	0.13*	0.08	0.01	0.05	-0.10	0.04	0.06	-	0.00	0.18*	-0.18*	0.05	-0.14*	0.22*	1.00		1.2
Age	36.29	7.65	0.00	0.12*	0.00	-0.07	-0.02	0.08	0.04	0.16*	0.00	-0.04	0.20*	0.00	0.15*	0.41*	-	1.0	1.3
																	0.01	0	0

*p < 0.05

Table 4.5. Multiple Linear Regression (Dependent Variables SE and ICV)

<i>Dependent Variable</i>	SE	β (Std Err)	ICV	β (Std Err)
<i>Independent Variables</i>	Access to resources	0.39*** (0.08)	Access to resources	0.39*** (0.08)
	Management support	0.15* (0.08)	Management support	0.17** (0.08)
	Procedural steps	-0.35*** (0.08)	Procedural steps	-0.20*** (0.07)
	Colleagues' support	0.24*** (0.08)	Colleagues' support	0.13* (0.07)
<i>Control Variables</i>	Organisation size	-0.09 (0.05)	Company size	-0.02 (0.05)
	Education	0.08 (0.10)	Education	-0.17* (0.10)
	Region	-0.05 (0.07)	Region	-0.18*** (0.06)
	Industry	0.02 (0.02)	Industry	-0.01 (0.01)
	Work hierarchy	0.06 (0.04)	Work position	0.02 (0.04)
	Local/international	0.08 (0.20)	Local/international	-0.06 (0.19)
	Organisation type	-0.13* (0.08)	Company type	-0.13* (0.07)
	Marital status	-0.21 (0.17)	Status	0.20 (0.16)

Gender	0.33** (0.15)	Gender	0.06 (0.14)
Age	0.03 (0.01)	Age	0.02** (0.01)
Number of Obs	313	Number of Obs	313
R-squared	0.41	R-squared	0.38
Adj. R-squared	0.38	Adj. R-squared	0.36

*p < 0.10; **p < 0.05; ***p < 0.01.

4.5. Discussion

Overall, my results suggested that all work atmosphere factors (access to resources, management support, procedural steps, colleagues' support) have a significant effect on SE and ICV. These results are supported with previous research, yet studied separately (Abrell & Karjalainen, 2017; Hitt et al., 2002; Ireland et al., 2003; Kuratko et al., 2009; Ma, Liu, et al., 2016; Wright et al., 1991). Therefore, I focus on the differences between the effects of work atmosphere factors on SE and ICV.

I found that access to resources is directly related to both SE and ICV. Then I observed the size of the effect and found that it also has the same-size effect on both SE and ICV. In fact, it is important to have resources to act upon opportunities, which is SE, and transfer those opportunities from ideas to actual products and processes, which is ICV. Acquiring the necessary resources to develop new products and processes is vital for acting upon opportunities available in the market (Karra et al., 2008). Moreover, previous research explained that social and financial resources are one of the keys to both SE (Ireland et al., 2003) and ICV (Kuratko et al., 2009). Yet, financial resources are less important than human and social resources in SE (Hitt et al., 2011).

When I tested the effect of management support on SE and ICV, I found that management support has a positive and significant effect on both SE and ICV. However, the size of the effect is greater with ICV. The results suggest that for an increase of SE by a value of 1, management support increases by a value of 0.15, while for an increase of ICV by a value of 1, management support increases by a value of 0.17. I argued earlier that SE takes a bottom-up approach and ICV is being enforced by upper management. Therefore, since ICV is being

enforced by upper management, the support employees can receive is complementary in ICV but not so common in SE. Consequently, when employees are being encouraged by managers, it increases innovations in terms of developing products, processes and new ventures; therefore, gain competitive advantage (De Brentani, 2001). In fact, managers tend to encourage their employees to balance between innovation and finishing their regular tasks assigned by higher managers (Ma, Liu, et al., 2016). Therefore, when ICV is being encouraged by higher managers, employees' regular tasks fall under the pressure of building new ventures, which is supported by their leaders.

Furthermore, I tested the effect of procedural steps on SE and ICV. I found that procedural steps have a negative and significant effect on both SE and ICV. However, the size of the effect is greater with SE. The model suggests that for an increase of ICV by a value of 1, procedural steps decrease by a value of 0.20, while for an increase of SE by a value of 1, procedural steps decrease by a value of 0.35. In other words, increased SE and ICV activities indicate simplification of the complicated procedural steps, which in SE is greater. This result indicates changing procedural steps and making them easier is required more in SE than in ICV. Furthermore, when upper management enforces new opportunities, which is an act of ICV, procedural steps are complementary to those activities related to those new opportunities (Ma, Liu, et al., 2016).

Lastly, I tested the effect of colleagues' support on SE and ICV. The results suggest that colleagues' support has a positive and significant effect on both SE and ICV. However, the size of the effect is greater with SE. The results suggest that for an increase of ICV by a value of 1, colleagues' support increases by a value of 0.13, while for an increase of SE by a value of 1, colleagues' support increases by a value of 0.24. The result indicates that colleagues' support has a greater effect size with SE than ICV. I argue that there are factors that affect employees in terms of asking for management support in the idea generation stage, e.g. trust. Stull and Aram (2010) explained that trust has a significant effect on CE behaviour, and I add that the size of the effect varies from one form to another. In addition, employees are most likely to ask for colleagues' feedback and support in the idea validation stage (De Clercq et al., 2016), which is part of the SE process. However, when the idea is approved by upper management and ready to be executed, employees seek higher management support (Ma, Ding, et al., 2016).

Despite the fact that CE, SE and ICV are usually studied as a single phenomenon (Hitt, Ireland, et al., 2001; Ireland et al., 2003; Kuratko & Audretsch, 2009; McGrath et al., 1994), the reality is that research has shown that there are different forms that are articulated differently within companies (Covin & Kuratko, 2010; Kuratko & Audretsch, 2009; Ma, Liu, et al., 2016; Simon et al., 1999). Also, literature is in need of integrated overviews to understand the characteristics and behaviours of CE (Jong et al., 2015; Neessen et al., 2019). Therefore, my analyses integrated two forms of CE, namely SE and ICV, to address this gap.

This has implications for theory and practice. From theoretical perspectives, this study helps to improve the vision and knowledge of different forms of CE. It confirms that SE and ICV perceive work atmospheres differently. This findings are in line with Park et al. (2014), who suggest that certain CE activities can have a bottom-up approach. I argue that this approach can be applied on SE. On the other hand, ICV seems to be led by top managers who enforce the opportunity to be executed within the organizational border. In this respect, work atmosphere factors have a different effect on one form of CE to another. The results suggest colleagues support and procedural steps have a greater affect on CE forms initiated by lower-level employees, such as SE. However, management support has greater effect on CE forms enforced by higher level management, such as ICV. Therefore, this study contributes to the discussion on the effect of work atmosphere on different forms of CE. Also, from practical perspectives, companies do not usually aim at both SE and ICV together. In this regard, when developing a certain strategy, decision-makers in organizations should pay attention to the fact that some factors are more relevant to SE or ICV. Understanding how work atmosphere affects different forms of CE helps organizations' leaders to create environments that support their strategic goals. Leaders in organizations should recognize the importance of dynamism and flexibility to benefit from opportunities available in the market to gain a competitive edge (Kuratko et al., 2011). In addition, policymakers and board members can take advantage of this study to design work atmospheres and draw up policies and procedures that enhance SE and ICV, which could be beneficial for the economy at large (Hitt, Ireland, et al., 2001; Sharma & Chrisman, 2007).

4.6. Conclusion

This article contributes to CE theory and practice. For the theoretical perspective, understanding which work atmosphere factors affect SE and ICV grants me to move a step forward toward understanding the CE phenomenon. The analysis of 313 responses from my online survey allowed me to explore how work atmosphere factors affect SE and ICV. My

analysis suggests that all four work atmosphere factors have a significant effect on SE and ICV, which is in line with previous research (Abrell & Karjalainen, 2017; Hitt et al., 2002; Ireland et al., 2003; Kuratko et al., 2009; Ma, Liu, et al., 2016; Wright et al., 1991). However, I analysed the size of the effect that those factors related to work atmosphere have on SE and ICV. Therefore, this study contributes to the discussion on the effect of work atmosphere on different forms of CE.

SE comprises those activities aimed at generating ideas for new products and services but it does not necessarily result in creating those products and services (Hitt et al., 2011). Therefore, I argue that SE takes a bottom-up approach and starts with lower-level employees. However, ICVs are those firms that reside from their parent firm to gain some freedom and grow through experiments. Therefore, procedural steps and colleagues' support are the work atmosphere factors that affect SE most. One of the reasons is that lower-level employees need their colleagues' help and may be challenged by procedural steps to move their ideas up to top management. However, management support affects ICVs more than it affects SE. I argue that top management will provide more support to ICVs that are providing new products and services to their parent firms, and less support to employees with new ideas and solutions that may or may not be executed.

My study also contributes to the practical field. Top managers, middle managers and team members can benefit from this study by designing a work atmosphere that invites entrepreneurial actions, which helps to activate SE and ICV and enhance the overall performance of organizations. Furthermore, they can understand the differences between those two forms of CE and therefore act upon the strategy that fit their needs to gain a competitive advantage. In addition, policymakers, board members and top managers can understand how different work atmosphere factors affect different forms of CE, which helps in drawing up strategies that serve their long- and short-term goals.

Lastly, I suggest some limitations and future research. First, my variables used measures self-reported by employees. However, self-reported measures have been commonly used in intrapreneurship studies (Monsen & Wayne Boss, 2009; Moriano et al., 2014; Zampetakis et al., 2009). Nevertheless, I performed CMB, KMO, BTS, VIF and Cronbach's alpha tests to ensure the validity of my data set. Second, this study used data from one country, namely Saudi Arabia. Therefore, replicating the same methods I used in different emerging countries should demonstrate to what extent my findings are comprehensive. Finally, I suggest taking this research further by exploring and comparing, using longitudinal research methods, the changes, if any, in work atmosphere effects on forms of CE while the Saudi economy is developing.

Chapter 5

5. DIVERSE EFFECTS OF CORPORATE ENTREPRENEURSHIP FORMS ON ORGANIZATIONAL GROWTH: EVIDENCE FROM SAUDI ARABIA

5.1. Introduction

As it was suggested that work atmosphere factors affect corporate entrepreneurship (CE) forms differently in Chapter 4, this chapter focuses on how different forms of CE affect and interact with each other and eventually influence organizational growth. CE has attracted the attention of scholars for over four decades (Aidis et al., 2008; Antoncic & Hisrich, 2001; Miller, 1983; Pinchot, 1985; Zahra, 1993b). As explained in previous chapters, CE refers to entrepreneurship activities within existing organizations (Antoncic & Hisrich, 2001). Due to the importance that CE has for organizational growth and economic development (Hughes & Mustafa, 2017; Sharma & Chrisman, 2007; Zahra, 1993b), research identified several forms of CE. The main CE forms that are exercised inside organizations' borders are strategic renewal (SR) (Kearney & Morris, 2015; Verbeke et al., 2007), internal corporate venturing (ICV) (Brumana et al., 2017; Burgers et al., 2009) and strategic entrepreneurship (SE) (Hitt, Ireland, et al., 2001; Kuratko & Audretsch, 2009).

Guth and Ginsberg (1990) define SR as a redeployment of resources that leads to a new combination of products and technologies. SR also includes replacement or refreshment of the “structure, services offered, scope of operations, administrative systems, routines, capabilities and resources” (Kearney & Morris, 2015, p. 429). ICV is another form of CE and is described as “the corporate venturing activities that result in the creation of organizational entities that reside within an existing organizational domain” (Sharma & Chrisman, 2007, p. 9). ICV mainly requires the production of new product and services for market (Ma, Liu, et al., 2016). The third form of CE is SE and is defined as “entrepreneurial actions with a strategic perspective” (Hitt, Ireland, et al., 2001, p. 480). However, SE aims to capitalize on business ideas but not necessarily execute them (Kuratko & Audretsch, 2009).

SR, ICV and SE share some characteristics, but they have fundamental differences. Overall, the main goal of the three CE forms is to create novel solutions, add value to customers and add wealth to owners (Burgers et al., 2009; Hitt, Ireland, et al., 2001; Kearney & Morris, 2015).

However, they have fundamental differences in terms of practice. For example: (1) SR requires redeployment or replacement of resources, administrative systems, capabilities and structure to reach new technologies and markets (Guth & Ginsberg, 1990; Kearney & Morris, 2015); (2) ICV requires a full-separation organizational structure (Burgers et al., 2009) or partial-separation organizational structure (Kuratko et al., 2009) to allow the freedom to learn and grow through experiments; (3) SE requires fewer financial resources compared to SR and ICV, and it does not necessarily result in the creation of new products and services (Kuratko & Audretsch, 2009).

Generally, research has studied SR, ICV and SE separately and suggested that those three CE forms have a direct effect on organizational growth (Garrett & Covin, 2015; Hitt, Ireland, et al., 2001; Kearney & Morris, 2015). However, most research on CE does not differentiate between these CE forms, hence this chapter provides empirical evidence that explains some differences. Also, research has not integrated multiple forms of CE in a single model to test and compare the effect they have on organizational growth. Research has shown that SR requires strategic changes for the whole organizational structure (Klammer et al., 2017). SR “finds the firm seeking to change how it competes” by renewing organizations’ strategies to be aligned with the external environment (Dess et al., 2003). Yet, ICV and SE seek opportunities that bring competitive advantages to firms by introducing new products and services or capitalizing upon novel business ideas. However, research has not explained whether ICV requires changes in the parent firms since the nature of this CE form requires a full (Burgers et al., 2009) or partial (McGrath et al., 2006) separation structure. In addition, we do not understand clearly whether SE requires any changes in the structure of the organization or if it is only activities that are present to search for opportunities. Kearney and Morris (2015) studied the mediation effect that SR has on the relationship between internal organizational factors, which includes decision-making and control, and organizational performance in the public sector. The results of their study suggest that SR has a mediation effect on this relationship. Hence, the literature lacks research investigating the indirect effect that those CE forms have on each other. In addition, Neessen et al. (2019) suggest that the CE literature needs integrated overviews to better understand the phenomenon of CE. Therefore, the aim of this chapter is to investigate the direct and mediating effect of CE forms that are being practised within the organizational borders (SR, ICV, SE) on organizational growth.

To examine the relationships between those three forms of CE and their effect on organizational growth, I use dynamic capabilities as a framework. As mentioned in previous

chapters, dynamic capabilities are defined as “the abilities to reconfigure a firm’s resources and routines in the manner envisioned and deemed appropriate by the firm’s principal decision-maker(s)” (Zahra et al., 2006). By doing so, I extend the discussion of CE forms and the effects that can be generated when those forms interrelate and contribute to organizational growth.

This paper seeks to make three main contributions. First, and foremost, is to explore the mediation role of SR on the relationship between ICV, SE, and organizational growth. Mainly, to understand if ICV and SE require changes in the organizational structure to be aligned with the external environment as those changes are fundamental in SR (Verbeke et al., 2007). Second, to fill the gaps in the current literature by using integrated overviews and including different forms of CE in one single model, therefore, answering the call of research proposed by previous researchers (Neessen et al., 2019). Third, to analyze and compare the positive and direct effect of SR, ICV, and SE on organizational growth using evidence from the context of Saudi Arabia. Having an overview of different CE forms in one analysis model would help to distinguish between CE forms. Therefore, we provide an enhanced understanding about CE forms and how they interact with each other. Our findings suggest that previous literature models were not complete and do not demonstrate the mediation effect of one form of CE on other forms and organizational growth.

This chapter is structured as follows. After the introduction, the theoretical background and hypotheses are discussed. This is followed by the methodology and results sections, where details on data description, measures, validity and reliability, and analysis technique are provided along with the results. The main findings are discussed in the following section. Finally, the chapter ends with a conclusion and a future research agenda.

5.2. Forms of corporate entrepreneurship

The concept of CE has been developing over the last four decades (Peterson & Berger, 1971). Terms such as “intrapreneurship” (Duncan et al., 1988), “corporate entrepreneurship” (Guth & Ginsberg, 1990), “corporate venturing” (Vesper, 1990) and “internal corporate entrepreneurship” (Schollhammer, 1982) have been aligned together and share similar meanings. Sharma and Chrisman (2007) defined corporate entrepreneurship 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”. As mentioned earlier, I focus on forms that are being practised within the borders of firms, i.e. strategic renewal (SR) (Khan et al., 2020; Klammer et al., 2017; Schmitt et al., 2018; Verbeke

et al., 2007), internal corporate venturing (ICV) (Abrell & Karjalainen, 2017; Brumana et al., 2017; Garrett & Covin, 2015) and strategic entrepreneurship (SE) (Hitt, Ireland, et al., 2001; Ireland et al., 2009; Kuratko & Audretsch, 2009) (see Figure 5.1).

Direct effect

SR refers to activities that aim to enhance a firm's ability to compete and take risks (Miller, 1983). These activities include, but are not limited to, redefinition of the business concept, organizational restructure and system-wide changes for innovation (Zahra, 1993b). Antoncic and Hisrich (2001) described SR, also known as "self-renewal", as activities related to strategy formation, reorganization and organizational change. In their study, they confirmed that organizational characteristics, including SR, are positively associated with CE that assists organizations in growing (Antoncic & Hisrich, 2001). SR, for the most part, refers to a redeployment of resources that leads to a new combination of products and technologies (Guth & Ginsberg, 1990; Khan et al., 2020). Empirical research found, through examining large private organizations (Heavey et al., 2009; Zahra et al., 1998) and the public sector (Antoncic & Hisrich, 2001; Kearney & Morris, 2015), that SR has a significant implication for organizational growth and performance. SR improves organizational growth by motivating "the organizations' proactiveness and willingness" (Kearney & Morris, 2015, p. 439) to take a risk and seek the development of new products and services (Antoncic & Hisrich, 2001; Keh et al., 2007). Therefore, one of the main drivers for organizations to grow is strategic renewal (Hayton & Kelley, 2006; Moretti et al., 2020). Based on the previous explanation, I propose the following hypothesis:

Hypothesis 1: SR has a positive effect on organizational growth.

Internal corporate venturing (ICV) is defined as "the corporate venturing activities that result in the creation of organizational entities that reside within an existing organizational domain" (Sharma & Chrisman, 2007, p. 9). "ICVs attempt to develop new products and/or markets for the parent firm" (Garrett & Covin, 2015, p. 763). Some researchers argued that ICVs require structural separation from parent firms in order to perform better and grow (Birkinshaw et al., 2002; Burgers et al., 2009). Other researchers disagree with total structural separation and suggest that ICVs could be maintained within the corporate core business (Kuratko & Audretsch, 2009; McGrath et al., 2006; Wiedeler & Kammerlander, 2019). However, the literature supports the notion that ICV improves the overall organizational growth by creating a sustainable competitive advantage and persistent high-class performance (Burgers et al.,

2009; Kuratko & Audretsch, 2009; Ma, Liu, et al., 2016). Previous research analysed the impact of ICV on organizational growth and suggested that ICV creates innovation, achieves growth, has a significant role in heated competitive markets and improves financial performance (Kuratko, 2012; Ma, Liu, et al., 2016; Morris et al., 2010; Zahra, 2015; Zahra & Covin, 1995). Therefore, I suggest the following hypothesis:

Hypothesis 2: ICV has a positive effect on organizational growth.

To enhance CE, employees should recognize opportunities through past entrepreneurial experience (Guerrero & Peña-Legazkue, 2013) or knowledge gained from non-entrepreneurial experience (Wang et al., 2013). Employees who recognize opportunities, use their skills and knowledge, and manage the available resources are the ones that activate CE activities in firms (Neessen et al., 2019). Those entrepreneurial activities combined with strategic thinking are called “strategic entrepreneurship”(SE). SE comprises “entrepreneurial actions with a strategic perspective” (Hitt, Ireland, et al., 2001, p. 480). SE refers to activities aimed at the development of products and services for market opportunities to create wealth (Hitt, Ireland, et al., 2001). However, SE does not necessarily result in creating new products or services (Kuratko & Audretsch, 2009). It is more related to long-term goals and may take a longer time to be reflected in organizational growth (Kuratko & Audretsch, 2009; Schroder et al., 2020). Ireland et al. (2009) studied how SE affects organizational growth and found that organizations must seek both opportunities and competitive advantage to add value to their customer and wealth to their owners. Overall, SE helps organizations to survive and grow (Hitt, Ireland, et al., 2001; Ireland et al., 2001, 2003; Kuratko & Audretsch, 2009). Based on this argument, I offer the next hypothesis:

Hypothesis 3: SE has a positive effect on organizational growth.

Mediation effect

Research has established a solid positive and significant relationship between ICV and organizational growth (Burgers et al., 2009; Kuratko et al., 2009). Also, the positive impact that SR has on organizational growth has been well identified (Antoncic & Hisrich, 2001; Kearney & Morris, 2015). However, literature lacks research analysing the mediation effect that SR and ICV has on organizational growth. Previous studies suggest that the main goal of ICVs is to create new products, services, markets and ventures for the parent firms (Garrett & Covin, 2015). ICVs demand learning through experiments, mostly requiring different structures in terms of rules, regulations and procedures from the parent firms (Garrett & Covin,

2015). To accomplish that, parent firms should fully separate (Birkinshaw et al., 2002; Burgers et al., 2009) or semi-separate (Kuratko & Audretsch, 2009; McGrath et al., 2006) the structure of rules, regulations and procedures to give some freedom to the new venture to grow and flourish (Simon et al., 1999). ICVs, with full-structure separation or semi-structure separation, should use parent firms' resources and leverage existing facilities to keep development costs low (Garrett & Covin, 2015; Khan et al., 2020). Therefore, I assume that existing resources that are owned by the parent firms are reconfigured or used differently to support ICVs.

This kind of action falls under the main purpose of SR. SR, for the most part, is the reconfiguration of resources that firms own with the aim of establishing new products and technologies (Guth & Ginsberg, 1990). ICV and SR appear to have some similarities. However, "Guth and Ginsberg (1990) describe strategic renewal and corporate venturing as two equally important, but fundamentally different, entrepreneurial activities that occur within established corporations" (Schmitt et al., 2018, p. 86). Based on the previous discussion, I follow Kearney and Morris's (2015) approach when they used SR as a mediator. Also, because mediations describe why a specific relationship is possible (Baron & Kenny, 1986), I posit the following hypothesis:

Hypothesis 4a: SR mediates the relationship between ICV and organizational growth.

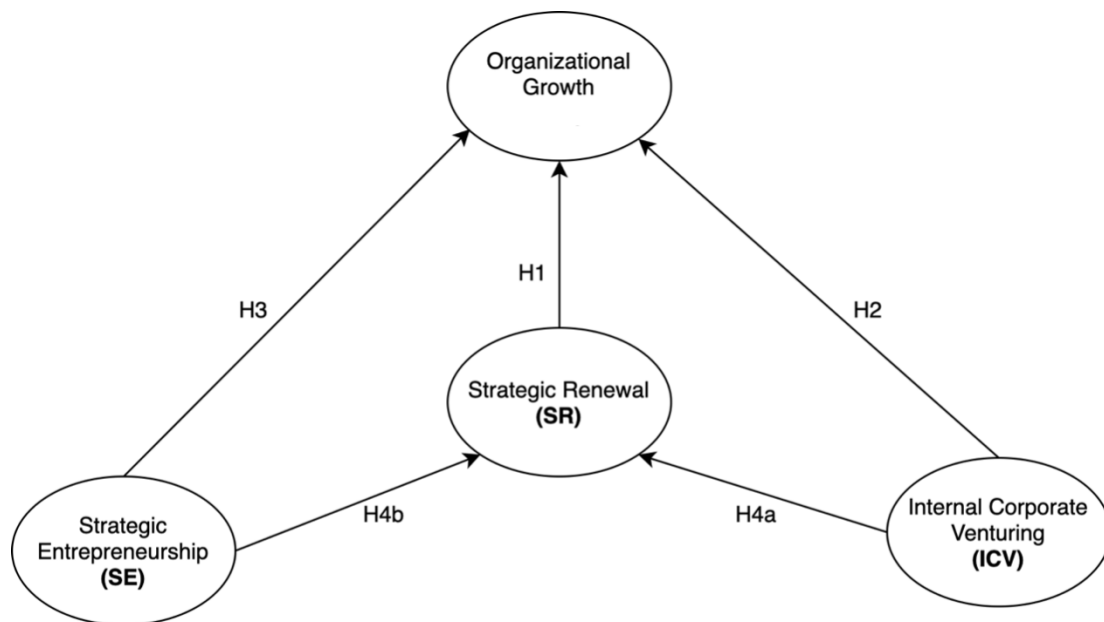
The positive and significant relationship between SE and organizational growth has already been agreed upon in literature (Hitt, Ireland, et al., 2001; Ireland et al., 2003). SE, in general, focuses on adding value to customers and consumers, as well as adding wealth to business owners (Hitt, Ireland, et al., 2001). In other words, SE helps organizations to survive, develop and grow. Also, as mentioned before, SR has a positive and significant impact on organizational growth (Antoncic & Hisrich, 2001; Kearney & Morris, 2015). Systems, rules, regulations and procedures serve to guide, measure and assess employees' behaviour in organizations (Kearney & Morris, 2015). However, Thompson (1999) explained that these systems tighten the room for creativity and destroy flexibility and sensitivity to market opportunities. Also, organizations that tend to control resources and monitor behaviour tightly can demotivate employees in terms of their creativity and willingness to take risks (Shih & Yong, 2001). Morris et al. (2006) suggest that organizations should keep reconfiguring their structure and build areas for informality and flexibility to facilitate entrepreneurial behaviours within organizations.

Flexibility and team-based efforts are in high demand in an autonomous strategy initiative, which is one of the main targets for SR (Burgers et al., 2009). Therefore, utilizing SR in organizations to allow flexibility would encourage employees' creativity and engagement in term of intrapreneurial activities (Moretti et al., 2020). Through SR, firms learn and explore possible opportunities and act upon them to gain competitive advantage and grow (Floyd & Lane, 2000). Consequently, through SR, organizations dedicate more space to build upon ideas and potential products and services, which is one of the main characteristics of SE, to gain competitive advantage, develop and grow. Based on this argument, I propose the following hypothesis:

Hypothesis 4b: SR mediates the relationship between SE and organizational growth.

Based on the previous discussion we propose the following framework:

Figure 5.1. Conceptual Framework



5.3. Methodology

Data

To test my models and hypotheses, I collected data targeting employees working in the public sector, private sector and semi-government organizations in the context of Saudi Arabia. Saudi Arabia is considered to be a major economic power regionally and globally. Oil production is the main revenue of the Saudi economy. However, there is a growing realization that the government cannot afford to meet its commitment to the general population (Hertog, 2013).

Therefore, the Saudi government is activating and encouraging the private sector's initiatives that aim to diversify the total income and rely more on knowledge-based revenue (Alrashidi & Phan, 2015). Therefore, organizations within the context are experiencing various changes in terms of structures and development to meet the government's expectations and to contribute to the development of the current economy (Khan, 2020). Socially, the government is also encouraging changes within the Saudi population's social norms, such as gender equality. Therefore, I believe that the context meets all of my concerns regarding growth, renewal, entrepreneurship and venture.

Based on the literature, I developed an online survey with five themes, namely organizational growth, strategic renewal, internal corporate venturing, strategic entrepreneurship and control variable (see Table 5.2). To reach my target participants, I followed the forward-backward translation method (Behling & Law, 2000) to translate the survey from English into Arabic and back again into English.

The steps of the survey development were as follows. First, I sent the first draft of the full survey to four scholars, two executives, two managers and two junior employees. Second, I interviewed all ten individuals via video calls to ensure the clarity of the survey and the availability of all possible answers. Third, a few adjustments were made in terms of linguistic issues, and one added possible answer. Lastly, I sent the final draft to another ten individuals with random characteristics, including another three scholars, to confirm the clarity of the survey. Next, I used online software to collect data, and the link to the survey was sent to firms from all regions of the context. When organizations received the survey link, they distributed it to their employees to enable them to participate in this research. After four weeks, a reminder email was sent to employees through their organizations. The link was sent to 4,328 employees. A total of 518 employees clicked on the survey link, of whom 313 completed the survey, making the response rate 7.23% (see Table 5.1).

Table 5.1. Sample demographics

Type of organization		Education level		Age		Gender	
Public	32.5%	High school	3.6%	< 20	0.6%	Male	70.7%
Semi-government	15.8%	Bachelor	49.6%	20–29	12.5%	Female	29.3%
Private	49.6%	Masters	31.9%	30–39	55.6%		
Non-profit	2.1%	Doctorate	12.8%	40–49	26.5%		
		Other	2.1%	> 50	4.8%		

Measures

As mentioned before, the survey was structured to serve five themes. The first theme included personal information, company size, region, work hierarchy and organization type. For personal information, I asked participants about their gender, age, marital status and education. For company size, I asked participants about the number of employees. For work hierarchy, I asked participants their professional position in the organization, such as executive, manager or officer. I asked participants if they worked in public, private, semi-government or non-profit organizations for organization type. It is common in previous research (Arend, 2014; Hitt et al., 2011; Minniti and Nardone, 2007; Murphy et al., 2019; Titus et al., 2017) to use the aforementioned measures as control variables. From the second to the fifth section, I provided participants with statements to test their level of agreement using a five-point scale (1 = totally untrue, 5 = totally true).

In the second section, statements were extracted from previous research (Auer Antoncic and Antoncic, 2011; Jones et al., 2008; Rivera, 2017) to test participants' level of agreement about organizational growth, which is used as dependent variable. A sample item is "*I have worked in a growing organization in terms of revenues, profits, number of new employees, work efficiency, ...etc., for the past three years*". In the third section, statements were extracted from previous research (Kearney & Morris, 2015; Shu et al., 2019; Verbeke et al., 2007) to test participants' level of agreement about SR which is used as independent variable and as a mediator. A sample item is "*My organization redeploys its resources seeking growth*". In the fourth section, statements were extracted from previous research (Brumana et al., 2017; Burgers et al., 2009; Garrett & Covin, 2015) to test participants' level of agreement about ICV, which is used as independent variable. A sample item is "*My organization introduces new products/services to the market*". In the last section, statements were extracted from previous research (Hitt, Ireland, et al., 2001; Ireland et al., 2009; Kuratko & Audretsch, 2009) to test participants' level of agreement about SE, which is used as independent variable. A sample item is "*You can enhance processes of workflow where you work or used to work at*" (see Table 5.2).

Data validity and reliability

I used five tests to test the validity and reliability of my data set, namely common method bias (CMB), Kaiser-Meyer-Olkin (KMO), Bartlett's Test of Sphericity (BTS), variance inflation factor (VIF) and Cronbach's alpha. CMB uses exploratory factor analysis to describe the

measurement error that is compounded by the sociability of respondents who provided a positive answer; a single factor is loaded (Chang et al., 2010). The cut-off value for CMB is 0.5 (Podsakoff et al., 2003). KMO and BTS test the correlations' adequacy and serve to clarify any multicollinearity issue. Hair et al. (2010) suggest that the KMO value should be greater than 0.6 and BTS should be significant at least at 5%. VIF also tests the considerable effect of multicollinearity. Craney and Surles (2002) stated that there is no formal cut-off value for VIF. However, a VIF value of less than 10 is acceptable, and less than 5 is adequate. Finally, Cronbach's alpha measures the reliability of the scale. Alpha values greater than 0.7 are considered adequate (Nunnally, 1994).

Analysis

I tested the proposed hypotheses by applying path analysis using latent mediation structural equation modelling (Little et al., 2007). I also performed a robustness test using multiple linear regressions (MLR) with manifest variables to optimize the ratio parameter estimates to increase the power of my analysis and found similar results (Gawke et al., 2018). Path analysis is considered to be an adequate analysis technique for testing hypotheses and models that include mediation variables (Antoncic & Hisrich, 2001). Path analysis enables analysis of one coherent model under multiple conditions holding mediation effects. Therefore, it decreases capitalization, unlike other methods that require separate analyses for each hypothesis, such as multiple regression. However, to further reduce bias, I controlled my analysis with ten control variables, including, but not limited to, age, gender and company size (see Table 5.2). Also, I have conducted a confirmatory factor analyses (CFA) to test the goodness of fit of the model. Based on the comparative fit index (0.91), Tucker-Lewis index (0.90), and standardized root mean square residual (0.07), the model is considered to be acceptable (Marsh et al., 2004).

Table 5.2. Description of Variables

	Variable	Description and database	Possible values	References
Dependent Variable	<i>Organizational Growth</i>	<ul style="list-style-type: none"> - I have worked in a growing organization in terms of revenues, profits, number of new employees, work efficiency, ...etc., for the past three years. - In the past three years, my organization has performed some changes seeking growth and scale-up. 	<ul style="list-style-type: none"> 1 = Yes 0 = No 	Auer Antoncic and Antoncic, 2011; Jones et al., 2008; Rivera, 2017
Independent Variable & Mediator Variable	<i>Strategic Renewal (SR)</i>	<ul style="list-style-type: none"> - My organization redeploys its resources seeking growth. - My organization installs new software and develops existing software to become more efficient. - My organization builds new business models and redefines existing business models seeking growth and development. 		Kearney and Morris, 2015; Shu et al., 2019; Verbeke et al., 2007
Independent Variable	<i>Internal Corporate Venturing (ICV)</i>	<ul style="list-style-type: none"> - There are opportunities in the field where I can develop new products or services for customers. - My organization introduces new products/services in the market. - My organization introduces existing products/services (but new to the firm) to the market. 	<ul style="list-style-type: none"> 1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree 	Brumana et al., 2017; Burgers et al., 2009; Garrett and Covin, 2015
	<i>Strategic Entrepreneurship (SE)</i>	<ul style="list-style-type: none"> - I can enhance processes of workflow where I work or used to work. - There are opportunities in my organization where I can develop innovative processes for my employer. - I take the initiative to develop innovative processes for my employer. 		Hitt, Ireland, et al., 2001; Ireland et al., 2003; Kuratko and Audretsch, 2009
Control Variables	<i>Organization size, education, region, industry, work hierarchy, local/international, organization type, marital status, gender, age</i>	Participants were asked about information related to the individual or the company that he/she works for. Those questions were asked in other related researches mentioned in the reference columns.	Multiple options	Arend, 2014; Hitt et al., 2011; Minniti and Nardone, 2007; Murphy et al., 2019; Titus et al., 2017

5.4. Results

All commands and analyses were performed using STATA 13. First, I started my analysis by running the correlation command. I noticed that some of my variables had high correlations (see Table 5.4). However, Gujarati (2003) suggests that multicollinearity problems start to arise when the correlation exceeds 0.8. However, in my case, the highest correlation was 0.67. Nevertheless, I performed five tests to test validity and reliability as well as eliminate any multicollinearity concerns. Therefore, I used CMB, KMO, BTS, VIF and Cronbach's alpha for my data set. My results suggest that CMB = 0.41, KMO = 0.86, BTS p-value = 0.00, Mean VIF = 1.5 and Cronbach's alpha = 0.85. Therefore, I consider my data to be adequate (see Table 5.3).

Table 5.3. Data Validity and Reliability Measures

Test	Result	Cut-off value	Source
CMB	0.41	< 0.50	Podsakoff et al., 2003
KMO	0.86	> 0.60	Hair et al., 2010
BTS	0.00	< 0.05	Hair et al., 2010
VIF	Max. 2.33, Min. 1.10	< 5 or < 10	Craney and Surles, 2002
Cronbach's alpha	0.85	> 0.70	Nunnally, 1994

After confirming my data set's adequacy, I started my analysis by applying path analysis using a mediation structural equation modelling tool to calculate the standard coefficient (β) of the interrelations among variables, the statistical significance for the hypothesis (p-value) and the standard error. In my model, organizational growth is the dependent variable, SR is the independent variable/mediator, and ICV and SE are independent variables (see Table 5.2). I separated my analysis into five models.

In the first model, I tested the direct effect of my control variables. In the second, I tested the direct effect of SR on organizational growth. My results suggest that SR has a positive and significant effect (at 1%) and a 0.85 coefficient. Therefore, the results support Hypothesis 1. In the third model, I tested the direct effect of ICV on organizational growth. My results suggest that ICV has a positive and significant effect (at 1%) and a 0.66 coefficient. Therefore, the

results support Hypothesis 2. In the fourth model, I tested the direct effect of SE on organizational growth. My results suggest that SE has a positive and significant effect (at 1%) and a 0.35 coefficient. Therefore, the results support Hypothesis 3. Based on Models 2, 3 and 4, I noticed that SR has a greater effect on organizational growth with $\beta = 0.85$, while ICV and SE have $\beta = 0.66$ and 0.35, respectively. In Model 5, I tested the direct effect of SR, ICV and SE along with the mediation effect that SR has on the relationship between ICV and SE, on the one hand, and organizational growth, on the other. The results suggest that SR is still positive and significant at 1%, ICV is positive but no longer significant and SE is positive, but the significance level has decreased to 10%. In addition, I found that ICV and SE have a positive and significant effect on SR at 1%. Therefore, I can conclude that SR fully mediates the relationship between ICV and organizational growth. However, SR partially mediates the relationship between SE and organizational growth. Hence, my results support Hypothesis 4a and 4b (see Table 5.5 and Figure 5.2).

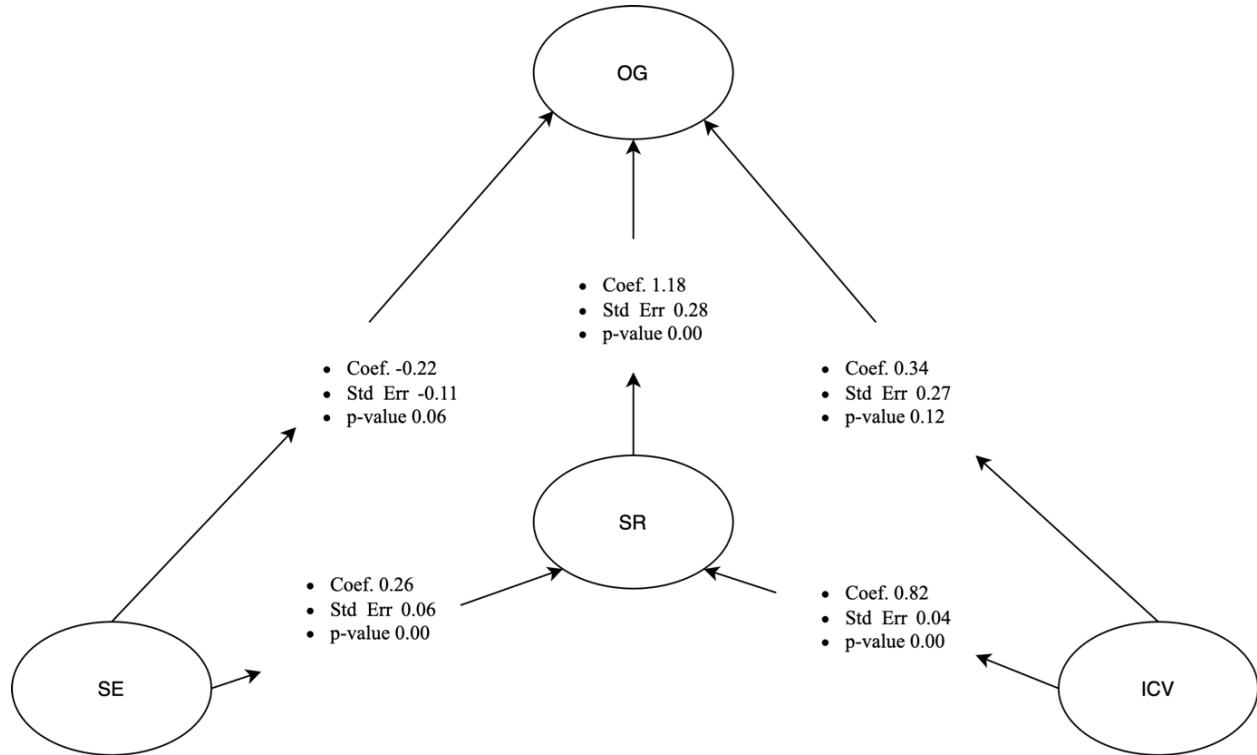
Table 5.5. Summary of Path Analysis

Dep. Variable	Model 1		Model 2		Model 3		Model 4		Model 5 (Mediation)			
	→ Org. growth		→ Org. growth		→ Org. growth		→ Org. growth		→ Org. growth		→ SR	
	β	(Std Err)	β	(Std Err)	β	(Std Err)	β	(Std Err)	β	(Std Err)	β	(Std Err)
SR	-	-	0.85**	(0.08)	-	-	-	-	1.18**	(0.28)	-	-
ICV	-	-	-	-	0.66**	(0.10)	-	-	0.34	(0.27)	0.82**	(0.04)
SE	-	-	-	-	-	-	0.35**	(0.09)	0.22*	(0.11)	0.26**	(0.06)
Organization size	0.03	(0.05)	0.07	(0.05)	0.08	(0.05)	0.04	(0.05)	0.05	(0.05)		
Education	0.00	(0.10)	-0.02	(0.10)	0.06	(0.09)	0.02	(0.09)	0.04	(0.09)		
Region	-0.13	(0.09)	-0.10	(0.09)	-0.02	(0.08)	-0.03	(0.08)	-0.02	(0.08)		
Industry	0.01	(0.01)	0.01	(0.01)	0.02	(0.01)	0.01	(0.01)	0.02	(0.01)		
Work hierarchy	0.03	(0.04)	0.01	(0.04)	0.00	(0.04)	0.04	(0.04)	0.03	(0.04)		
Local/international	0.21	(0.20)	0.19	(0.19)	0.21	(0.18)	0.24	(0.17)	0.24	(0.17)		
Organization type	0.02	(0.08)	0.06	(0.08)	0.09	(0.07)	0.09	(0.07)	0.09	(0.07)		
Marital status	0.24	(0.16)	0.26	(0.16)	0.13	(0.15)	0.12	(0.14)	0.10	(0.14)		
Gender	-0.15	(0.15)	-0.23	(0.15)	-0.19	(0.14)	-0.03	(0.13)	-0.04	(0.13)		
Age	0.00	(0.01)	0.00	(0.01)	0.00	(0.01)	-0.01	(0.01)	-0.01	(0.01)		
No. of Obs	313		313		313		313		313			

R^2	0.0306	0.2889	0.1815	0.0758	0.2945
Adjusted R^2	-0.0015	0.2630	0.1516	0.0420	0.2638

*p < 0.10; **p < 0.01

Figure 5.2. Model 5 (Moderation Effect)



5.5. Discussion

Overall, the results for the direct effect of different forms of CE are in line with the literature. The results, along with previous research, suggest that SR, ICV and SE have a positive and significant effect on organizational growth (Burgers et al., 2009; Heavey et al., 2009; Ireland et al., 2003). However, this chapter also analyse the moderation role of SR on the relationship between different ICV and SE on the one hand, and organizational growth on the other hand, following Kearney and Morris’s (2015) approach.

As previously mentioned, the results suggest that SR has a positive and significant effect on organizational growth. SR is one form of CE, and it assists growth (Antoncic & Hisrich, 2001). SR mainly aims to achieve growth in terms of customer base, financial indicators, geographic reach, and the number of products and services. SR assets grow by reconfiguring organizational structures to be more efficient and effective (Kearney & Morris, 2015). Creating room for

flexibility within the organizational structure would encourage entrepreneurial actions that would lead to competitive advantages and growth (Thompson, 1999).

The analysis suggests that ICV has a positive and significant effect on organizational growth. ICV mainly aims to build a new venture with new products or services that reside from the parent firm (Garrett & Covin, 2015). These acts would eventually benefit the parent firm in many ways. Among many forms of benefits, the new venture could grow, compete and generate revenue for the parent firm. Also, some parent firms allow the option of buyouts for new ventures, which will generate revenue. Overall, ICV assets grow parent firms by encouraging creativity and innovation in, somehow, a different work environment than the parent firms (Zahra, 2015).

The results also suggest that SE has a positive and significant effect on organizational growth. SE encourages innovation, creativity, seeking opportunities available and/or building new markets for customers. However, SE does not necessarily create new products and services (Kuratko & Audretsch, 2009). Therefore, SE encourages entrepreneurial acts that eventually result adding value to customers and wealth to owners (Ireland et al., 2003). Therefore, SE assets grow in the long term and the results of activating SE in a given organization may be delayed (Kuratko & Audretsch, 2009) because of the nature of this form of CE.

Regarding the moderation effects of SR on the relationship between ICV and SE, on the one hand, and organizational growth, on the other hand, I compared the results of Models 2, 3 and 5 (see Table 5.5). I noticed in Models 2 and 3 that SR and ICV have a positive and significant direct effect on organizational growth. However, in Model 5, the direct effect of ICV on organizational growth has vanished, and now ICV has a positive and significant effect on SR. Therefore, my results suggest that SR fully mediates the relationship between ICV and organizational growth. I argue that SR and ICV share some similarities, but they have fundamental differences (Schmitt et al., 2018). Overall, SR and ICV share the idea of organizational restructuring and resource redeployments. Researchers of the topic ICV argued that ICVs require a full or partial separation in terms of organizational structure (Burgers et al., 2009; Kuratko et al., 2009). Therefore, I can understand that new ventures require a different set of organizational structures in order to have some freedom to experiment, grow and compete. This kind of action is similar to SR, which is, mainly, a redeployment of resources that leads to a new combination of products and technologies

(Guth & Ginsberg, 1990). Also, the parent firms would have structural changes and give attention to the ICVs to support growth and success.

When I compare the results of Models 2, 4 and 5 (see Table 5.5), I can clearly see in Models 2 and 4 that SR and SE have a positive and significant direct effect on organizational growth. However, in Model 5, the direct effect of SE on organizational growth has weakened, and now SE has a positive and significant effect on SR. Therefore, SR partially mediates the relationship between SE and organizational growth. SE refers to “entrepreneurial actions with a strategic perspective” (Hitt, Ireland, et al., 2001, p. 480). Also, SE does not necessarily result in creating new products and services (Kuratko & Audretsch, 2009). Therefore, I argue that SE does not require considerable changes in terms of organizational structures. SE requires some freedom to observe opportunities available in the market and generate creative, innovative and novel solutions. SE requires innovation and creativity. However, systems, rules and regulations, and complicated procedures can discourage creativity and sensitivity to opportunities (Thompson, 1999). Therefore, organizations should keep reconfiguring their structures, allowing some freedom to facilitate entrepreneurial behaviours (Morris et al., 2006). Thus, SR partially mediates the relationship between SE and organizational growth.

The literature has studied SR, ICV and SE separately as a single phenomenon (Burgers et al., 2009; Garrett & Covin, 2015; Hitt, Ireland, et al., 2001; Kearney & Morris, 2015; Kuratko & Audretsch, 2009; Verbeke et al., 2007). The reality is that those forms of CE share some characteristics with fundamental alterations (Guth & Ginsberg, 1990; Schmitt et al., 2018). For example, SR mainly reconfigure organizations’ resources to be more efficient (Dess et al., 2003), ICV execute business opportunities through new ventures to gain competitive advantage as of today (Ma, Liu, et al., 2016), and SE build upon business ideas but not necessarily execute them to serve long-term goals (Kuratko & Audretsch, 2009). Also, the literature is in need of integrated overviews of those CE forms to better understand CE behaviours in organizations (Neessen et al., 2019). I argue that CE forms can have an indirect effect on each other. Therefore, the analyses included different forms of CE in a single model to analyse the interrelation between those forms of CE, which are SR, ICV and SE, and their effects on organizational growth. When a CE form aims to execute new products and services, in this study SR and ICV, it requires redeployment of resources and structure to reach new markets and technologies. ICV’s main goal is to produce new products and services; therefore,

SR plays a full mediation role. However, when the CE form aims to generate novel solutions and creative ideas and not necessarily result in creating new products and services, in this study SE, it requires freedom more than it requires the reforming of organizational structures; therefore, SR has a partial mediation role.

Hence, this chapter makes three main contributions. First, it extends the discussion on SR, ICV and SE by confirming the mediation effects of SR on the relationship between ICV and SE, on the one hand, and organizational growth, on the other. Second, the analyses fill the gaps in the literature and, specifically, use integrated overviews of CE forms to analyse how CE forms impact each other (Neessen et al., 2019). Third, this chapter provides an overview of different forms of CE and their effect on organizational growth using evidence from one of the most promising emerging economies (Abu Bakar et al., 2017). This study offers insightful information on how different CE forms act in contexts outside the traditional Western contexts where most studies are conducted (Hughes & Mustafa, 2017).

This chapter also has practical implications. Empirical research in emerging economies is lacking in the literature (Hornsby et al., 2013; Hughes & Mustafa, 2017). Therefore, this study helps researchers to develop theories around CE phenomenon. Understanding how forms of CE affect organizational growth would help owners and employees working at different management levels. Top management can use these analyses to accurately draw up policies and strategies that lead to their strategic goals, whether to produce new products and services within the organizational activity, reside those new products and services to a new internal venture, or encourage innovation and creativity to help with long-term goals. In addition, middle management can understand those strategies that have been drawn up by top management and react sufficiently to reach targets set by top management.

5.6. Conclusion

This article extends the knowledge about SR, ICV and SE. The analysis of 313 responses from the online survey I collected in the context of Saudi Arabia allowed me to explore the direct effect of SR, ICV and SE on organizational growth, and the mediation role of SR in the effect that ICV and SE have on organizational growth. I confirmed that SR, ICV and SE have a positive and significant direct effect on organizational growth. These results are in line with previous research (Burgers et al., 2009; Garrett & Covin, 2015; Hitt, Ireland, et al., 2001; Kearney & Morris, 2015; Kuratko &

Audretsch, 2009; Verbeke et al., 2007). However, I took the analyses beyond the work done by other scholars to explore one CE form's mediation roles on other CE forms.

I confirmed the mediation role of SR in the relationship between ICV and SE, on the one hand, and organizational growth, on the other. My analyses suggest that SR fully mediates the relationship between ICV and organizational growth. However, SR partially mediates the relationship between SE and ICV. ICVs are required to produce new products and services for the parent firms and markets. Therefore, it requires the redeployment of resources and fundamental changes in the organizational structure. Hence, SR fully mediates the relationship. On the other hand, SE does not require the introduction of new products and services, but it encourages innovations and creative solutions. Hence, SR partially mediates the relationship.

This chapter contributes to the practice field as well. It helps researchers to understand and generate knowledge around CE activities in emerging economies. It provides a summary of different forms of CE and how they affect organizational growth directly and indirectly, which helps policymakers, higher-level managers and team leaders to draw up policies and strategies that help to serve their planned objectives. I mentioned earlier that SR, ICV and SE share some similarities, but they have essential differences. Hence, when top management gains good knowledge of different CE forms it will result in more accurate and efficient strategic movements. Also, lower-level management and team leaders can use this study to understand different forms of CE and react to the strategic efforts of upper management more efficiently. Precisely, reach the outcomes expected from the upper management.

Lastly, I suggest some limitations and future research. My data used self-reporting measures by participants. However, to ensure the validity of my data, I performed CMB, KMO, BTS, VIF and Cronbach's alpha tests. Also, self-reporting measures are commonly used in the corporate entrepreneurship field (Monsen & Wayne Boss, 2009; Moriano et al., 2014; Zampetakis et al., 2009). Second, the data set I used is from one context, i.e. Saudi Arabia. Therefore, I suggest replicating the data collection method and collecting the same measures in a different context to test the extend to which my results are comprehensive. Third, my data set included a mix of different sectors, including public, private and semi-government sectors, to understand the overview of CE phenomenon in the context. Yet, I suggest conducting studies that distinguish between those sectors to better understand how CE activities are treated in each sector. Finally, I

suggest using a longitudinal research method to compare and explore the changes that may appear in the coming years.

Chapter 6

6. CONCLUSIONS

6.1. Main conclusions

As mentioned in previous chapters, corporate entrepreneurship plays a vital role in established companies. Research has shown that corporate entrepreneurship improves organizational and economic performance (Gupta et al., 2004). In particular, corporate entrepreneurship, including its forms, helps existing organizations to identify new business ideas, evaluate opportunities, design future strategic actions and maintain competitive advantages (Antoncic & Hisrich, 2003; Hitt, Ireland, et al., 2001; Kearney & Morris, 2015). Therefore, scholars suggest that corporate entrepreneurship is one of the most important factors that lead to a high-level organizational performance (Morris et al., 2006). In general, corporate entrepreneurship refers to “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” (Sharma & Chrisman, 2007, p. 8).

Due to this importance, researchers have investigated what factors enable corporate entrepreneurship in existing organizations (Adachi & Hisada, 2017; Judge & Zapata, 2015; Martiarena, 2013; Parker, 2011; Turro et al., 2020; Yela Aránega et al., 2020), and what the consequences of corporate entrepreneurship are for organizations’ performance (Antoncic & Hisrich, 2001; Lages et al., 2017; Ribeiro Soriano et al., 2012). Furthermore, scholars have defined forms of corporate entrepreneurship, such as strategic renewal and internal corporate venturing, that share the same objectives but have differences in practice (Kearney & Morris, 2015; McGrath et al., 1994). The body of literature on corporate entrepreneurship is growing, and yet there are gaps in the literature and potential research lines that need to be studied (Neessen et al., 2019; Urbano & Turro, 2013). Most of the research conducted in the corporate entrepreneurship field was in Western developed countries (Hughes & Mustafa, 2017). Yet, researchers expect that conditioning factors and consequences of corporate entrepreneurship will be different in emerging economies (Bruton et al., 2010; Yiu & Lau, 2008). However, there is no clear evidence that supports their suggestions. Consequently, scholars are calling for research about corporate entrepreneurship that provides evidence from emerging economies (Hornsby et al., 2013; Hoskisson et al., 2000; Hughes & Mustafa, 2017).

Therefore, the main objective of this thesis is to analyse corporate entrepreneurship in an emerging economy using human capital, dynamic capabilities and institutional economics as theoretical frameworks. This thesis seeks to analyse corporate entrepreneurship at three levels, namely the individual level (human capital), the organizational level (dynamic capabilities) and the environmental level (institutional economics). The hypotheses developed in my study used a regional context, i.e. Saudi Arabia. I used primary and secondary data in this thesis to achieve my objectives. For the primary data, I used an online survey targeting employees working in Saudi Arabia and collected 313 usable responses in the year 2020 (Chapters 4 and 5). For the secondary data, I obtained data from the GEM project for the year 2016 for Saudi Arabia. This thesis has mainly used three analysis techniques that serve each specific objective. Those techniques are logistic regression, multiple linear regression and path analysis.

The objective of Chapter 2 is to review the literature about corporate entrepreneurship that uses human capital, dynamic capabilities and institutional economics as theoretical frameworks. In this chapter, I reviewed 123 articles and analysed 51 articles that fit my framework and used one or more of the aforementioned frameworks that I am targeting in this thesis. My analysis suggests that the corporate entrepreneurship field of research has been emerging fast in the last nine years. I observed that the main research objectives that scholars are addressing are related to outcomes and antecedents of corporate entrepreneurship. I also spotted that authors concentrate on environmental conditions and internal conditions in their studies. Also, the primary analysis techniques used were multiple linear regression and logistic regression. However, the literature suggests that the body of literature on corporate entrepreneurship is growing, and yet it needs an integrated overview (Neessen et al., 2019; Urbano & Turro, 2013).

The objective of Chapter 3 is to analyse the direct and moderating effects of the determinants of entrepreneurial employee activity. In this chapter, I used GEM 2016 data and analysed 1,499 responses, and found that intrapreneurial skills, education and social legitimacy have direct effects on corporate entrepreneurship. Also, I found that procedures and social legitimacy moderate and reinforce the effect of intrapreneurial skills on corporate entrepreneurship and make this relationship stronger. In addition, I found that the high social legitimacy of independent entrepreneurs in Saudi society discourages employees from applying their business ideas in their workplace and they prefer to establish a new start-up, outside the organizational border, to respect society.

The objective of Chapter 4 is to analyse how different work atmosphere factors affect different forms of corporate entrepreneurship. The two forms of corporate entrepreneurship I used in this chapter were strategic entrepreneurship and internal corporate venturing. I also defined four work atmosphere factors that previous scholars used, i.e. access to resources, management support, procedural steps and colleagues' support. I used an online survey to gather 313 usable responses and applied multiple linear regression as an analysis technique. My results suggest that procedural steps and colleagues' support are the work atmosphere factors that affect SE most. Yet, management support affects internal corporate ventures more than it affects strategic entrepreneurship.

The objective of Chapter 5 is to explore the mediating effects that forms of corporate entrepreneurship have on each other. I used strategic renewal, internal corporate venturing and strategic entrepreneurship as corporate entrepreneurship forms. I used the data gathered through an online survey in Chapter 4, which include 313 usable responses. The results of path analysis suggest that strategic renewal, internal corporate venturing and strategic entrepreneurship have a positive and significant direct effect on organizational performance. Also, I found that strategic renewal mediates the relationship between internal corporate venturing and strategic entrepreneurship, on the one hand, and organizational performance, on the other. My analyses suggest that strategic renewal fully mediates the relationship between internal corporate venturing and organizational performance. However, strategic renewal partially mediates the relationship between strategic entrepreneurship and organizational performance.

Overall, this thesis has had several steps of development. It started by reviewing articles that were formed around corporate entrepreneurship using one of the three aforementioned approaches that I seek. Also, in Chapters 3, 4 and 5, multiple studies were performed to analyse corporate entrepreneurship at individual, organizational and environmental levels. To sum up, the analyses suggest that those three levels interact and interrelate with each other and eventually impact corporate entrepreneurship activities. It was suggested that individual, corporate and environmental factors significantly affect corporate entrepreneurship activities in emerging economies. Furthermore, environmental factors reinforce and influence individual factors to influence corporate entrepreneurship. In addition, as regards dynamic capabilities, it was suggested that corporate entrepreneurship forms that take a top-down approach, such as internal corporate venturing, need top management support. On the other hand, corporate entrepreneurship forms

that take a bottom-up approach and focus on generating ideas and not necessarily executing them, such as strategic entrepreneurship, need co-worker support and easy procedures. Lastly, it was suggested that forms of corporate entrepreneurship that are characterized by a high level of dynamism, such as strategic renewal, not only influence organizational growth but also mediate the effect of other, less dynamic forms, such as strategic entrepreneurship.

6.2. Implications

This study has multiple important theoretical and practical implications. It offers new dimensions of understanding of the corporate entrepreneurship phenomenon. As mentioned earlier, the body of literature around corporate entrepreneurship is developing, and there are gaps that need to be filled to understand corporate entrepreneurship better. Moreover, to the best of my knowledge, the literature lacks empirical studies that provide evidence about the behaviour of corporate entrepreneurship in emerging economies. In this regard, this thesis used a triangular approach to obtain a deeper understanding of corporate entrepreneurship in emerging economies. The thesis also can be beneficial for policymakers, top managers and middle managers. It provides insights and information that can be used to activate corporate entrepreneurship in organizations. Moreover, the thesis describes empirical studies that used primary and secondary data to investigate different forms of corporate entrepreneurship that suggest some factors can foster and encourage a form of activity that can be used in organizations. In the next few paragraphs, the contributions of each chapter are described in more detail.

In Chapter 2, the systematic literature review that scanned 123 articles and analysed 51 articles provides a solid background in regard to the field of corporate entrepreneurship. Mainly, it provides information regarding three approaches that have been used by scholars in the field of corporate entrepreneurship, namely human capital, dynamic capabilities and institutional economics. This study also helps scholars and researchers to develop future research lines that would contribute to the development of the body of literature on corporate entrepreneurship.

In Chapter 3, the analysis of the antecedent of corporate entrepreneurship using human capital and institutional economics contributes to the literature in several ways. This chapter provides more generous information by analysing corporate entrepreneurship at individual and environmental levels. The results suggest that environmental factors have more impact on corporate entrepreneurship than individual factors. In addition, those environmental factors have a different

effect in emerging economies than they do in developed economies, where most studies are performed (Hughes & Mustafa, 2017a; Turro et al., 2014). Therefore, the chapter contributes to the literature by showing that context perhaps plays a more fundamental role than what is understood in the literature.

Chapter 4 analyses how work atmosphere factors affecting different forms of corporate entrepreneurship provide an advanced understanding of corporate entrepreneurship. This chapter provides empirical evidence that work atmosphere has a different effect on two forms of corporate entrepreneurship. Hence, understanding the different effects helps us to better understand each form of corporate entrepreneurship, which leads to a more profound understanding of the corporate entrepreneurship phenomenon. From practical perspectives, this chapter helps top management and middle managers understand corporate entrepreneurship better, which would allow them to design work environments that encourage the formation of the corporate entrepreneurship they are aiming to activate. When middle managers understand the fundamentals of corporate entrepreneurship forms, they can react and apply the strategic actions that are deemed appropriate by high-level managers more efficiently.

Chapter 5 analyses the interrelation between different forms of corporate entrepreneurship and their direct and mediation role in organization growth and provides an enhanced vision of how forms of corporate entrepreneurship react to each other. The chapter extends the discussion on the mediation role of strategic renewal in the relationship between ICV and SE, on the one hand, and organizational growth, on the other. This chapter also fills gaps in the literature by using integrated forms of corporate entrepreneurship, which were suggested by other scholars (Neessen et al., 2019). The chapter also overviews the direct effects that different forms of corporate entrepreneurship have on organizational performance. From practical perspectives, policymakers and top managers can benefit from this chapter in accurately applying corporate entrepreneurship that fits their strategic plans and objectives. Lower management levels can also have an overview of different corporate entrepreneurship forms that help fulfil top management expectations.

To conclude, this thesis has summarized the work done in the field of corporate entrepreneurship in the past two decades. In fact, the thesis has also analysed how individual, organizational and environmental factors act and react to each other and eventually affect corporate entrepreneurship activities in an emerging context. More precisely, it has analysed how environmental factors reinforce individual factors that enhance corporate entrepreneurship and how organizational

factors affect forms of corporate entrepreneurship differently. In addition, this study demonstrates how forms of corporate entrepreneurship affect each other, which ultimately influences organizational growth. Consequently, this thesis contributes to the discussion on how corporate entrepreneurship is shaped in emerging economies. It also extends the vision of the phenomenon of corporate entrepreneurship and its forms by including multiple forms in single models.

Furthermore, policymakers, top management and team leaders can benefit from this thesis in drawing up strategies that have been tested scientifically to achieve their strategic goals. Moreover, team leaders and team members can use this study to react efficiently when corporate entrepreneurship strategies are being implemented in their workplace. Finally, founders and entrepreneurs who are scaling up their businesses can use this study to understand the determinants of corporate entrepreneurship activities and effectively apply the right strategy that serves their goals.

6.3. Limitations and future research lines

This research has several limitations and future research lines that are worth mentioning. First, there is no one specific definition of corporate entrepreneurship that all authors are agreed on. Therefore, one group of scholars considers corporate entrepreneurship to be a broad concept. However, other scholars measure this phenomenon partially (Covin & Kuratko, 2010; Urbano & Turro, 2013; Zahra, 1993a).

Second, in the systematic literature review (Chapter 2), I scanned 123 articles and analysed 51 articles using the Social Science Citation Index and utilizing the Web of Science server. Therefore, several published and proceeding works were not included, such as doctoral theses and books. Also, the number of citations was collected from one server, yet other servers might have a different citation count than what was mentioned in Chapter 2.

Third, the dependent variable that was used in Chapter 3 has a binary nature that was used as a proxy to corporate entrepreneurship. However, this variable was generated by the GEM project to measure corporate entrepreneurship specifically (Reynolds et al., 2005). Nevertheless, I suggest that future studies should focus on forms of corporate entrepreneurship, such as strategic renewal and internal corporate venturing. Also, many studies used the same database in their research (Aidis et al., 2008; Alvarez & Urbano, 2011; Guerrero et al., 2019; Urbano & Alvarez, 2014). Moreover, the GEM data set I used did not include proper firm-level controls (such as industry or

firm size), and I suggest that this type of variable that may influence EEA should be included in further research.

Fourth, Chapters 4 and 5 used self-reporting measures by employees. In the field of corporate entrepreneurship studies, this type of measure is commonly used (Monsen & Wayne Boss, 2009; Moriano et al., 2014; Zampetakis et al., 2009). Nevertheless, I performed CMB, KMO, BTS, VIF and Cronbach's alpha tests to ensure the validity of my data set.

Fifth, in Chapters 4 and 5, I design a survey that included 313 responses from employees working in different sectors, including public, private and semi-governmental sectors. Generally, I preferred to analyse the overview of corporate entrepreneurship in the context. However, I suggest further studies should be performed for each sector to understand the behaviour of each sector in regard to corporate entrepreneurship.

Sixth, Chapters 3, 4 and 5 used analysed corporate entrepreneurship activities in one context that represents emerging economies. Therefore, I suggest replicating this study in other emerging economies that share similar characteristics to Saudi Arabia to demonstrate the extent to which my findings are comprehensive.

Seventh, I suggest refining and replicating the data collection methods in different contexts and utilizing the longitudinal research method to understand the changes that contexts would offer while being developed. This will help in understanding the nature of corporate entrepreneurship and may develop theories of the phases that corporate entrepreneurship is going through.

Eighth, in Chapter 3, I used one variable to represent formal and informal institutions. Hence, I suggest expanding the approaches I used by testing more variables with a view to better understanding the effect of institutional economics on corporate entrepreneurship.

Lastly, this thesis studied the phenomenon of corporate entrepreneurship in one of the emerging economies, which is Saudi Arabia. This context is one of the G20 countries in terms of economic power. Yet, the main revenue is being generated from oil production. Therefore, this context can provide resources that would promote corporate entrepreneurship, unlike other emerging economies. Also, more than 70% of the labor force in Saudi Arabia in the private sector are foreigners who were not allowed to start a business in the context without a Saudi partner. However, this law was adjusted in recent years and now the Saudi Government is encouraging foreign investors to be engaged in the Saudi Economy (Alfalih and Hadj, 2020). Therefore, their behaviour in their organization would change, which is worth analysing in future research.

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APPENDIX

List of articles reviewed in Chapter 2

Approach	Author(s)	Year	Journal	Title	Objective
Human Capital	Adachi, T; Hisada, T	2017	Small Business Economics	Gender differences in entrepreneurship and intrapreneurship: an empirical analysis	This study examines the gender gap in start-up activities to determine whether it is family status or employment status that is responsible for the observed gender gap.
	Alshumaimri, A; Aldridge, T; Audretsch, DB	2012	Journal of Technology Transfer	Scientist entrepreneurship in Saudi Arabia	This paper examines scientist entrepreneurship at universities in Saudi Arabia.
	Braunerhjelm, P; Ding, D; Thulin, P	2018	Small Business Economics	The knowledge spillover theory of intrapreneurship	To examine how labour mobility impacts innovation distributed by firm size.
	Chang, Y.Y., Hughes, P., Hodgkinson, I., Chang, C.Y. and Seih, Y.T.	2021	Review of Managerial Science	The antecedents of corporate entrepreneurship: multilevel, multisource evidence	To develop a multilevel model of firm-level high-performance work systems, dyad-level human capital, firm-level bridging ties and unit-level corporate entrepreneurship.
	Erogul, MS; McCrohan, D	2008	African Journal of Business Management	Preliminary investigation of Emirati women entrepreneurs in the UAE	This study presents an exploratory investigation of Emirati female entrepreneurs in the United Arab Emirates.
	Franco, M; Pinto, J	2017	Journal of Librarianship and Information Science	Intrapreneurship practices in municipal archives: A practice-oriented study	To demonstrate how the archivist and all the professionals dealing with the municipal archives can be intrapreneurs in the organization where they perform duties, through their creativity, better services, using their personal involvement and ingenuity in creating products or new services.
	Gawke, JC; Gorgievski, MJ; Bakker, AB	2017	Journal of Vocational Behavior	Employee intrapreneurship and work engagement: A latent change score approach	Although sample evidence has shown that an employee's intrapreneurial activities (i.e. employee intrapreneurship) positively impact organizational outcomes, research on how these activities affect employee outcomes is scarce.
	Gawke, JC; Gorgievski, MJ; Bakker, AB	2018	Journal of Occupational Health Psychology	Personal costs and benefits of employee intrapreneurship: Disentangling the employee intrapreneurship, well-being, and job performance relationship	To examine how employees' reinforcement sensitivity qualifies the relationship among their intrapreneurial behaviour, subjective well-being and other-rated job performance.
	Guerrero, M., Amorós, J.E. and Urbano, D.	2019	Small Business Economics	Do employees' generational cohorts influence corporate venturing? A multilevel analysis	To understand how a diversified workforce influences some determinants (i.e. employees' human capital and attitudes, organizational climate and environmental conditions) of entrepreneurial organizations' outcomes (i.e. corporate venturing).
	Hayton, JC	2003	Human Resource Management	Strategic human capital management in SMEs: An empirical study of entrepreneurial performance	To study the association between human capital management and human resource management.

	Kor, YY; Sundaramurthy, C	2009	Journal of Management	Experience-based human capital and social capital of outside directors	To posit that outside directors' board memberships and managerial experiences have additive and interactive effects.
	Moriano, JA; Molero, F; Topa, G; Mangin, JPL	2014	International Entrepreneurship and Management Journal	The influence of transformational leadership and organizational identification on intrapreneurship	This study examines the influence of manager leadership styles on employee intrapreneurial behaviour and the mediating role of organizational identification.
	Park, SH; Kim, JN; Krishna, A	2014	Management Communication Quarterly	Bottom-up building of an innovative organization: Motivating employee intrapreneurship and scouting and their strategic value	This article proposes a theoretical model to understand the ways in which organizations can increase employees' voluntary intrapreneurship and motivated business information seeking and sharing, and scouting, via relationship building.
	Peña-Ayala, A. and Villegas-Berumen, H.G.	2020	International Journal of Management Education	Evaluation of the influence that higher education boosts on students' entrepreneurial proclivity: Evidence from Mexico and Spain	To analyse the link between higher education and entrepreneurship through a field study in Mexican and Spanish institutions, whose cities reveal contrasting demographic, social and economic features that play an influential role.
	Rigtering, JPC; Weitzel, U	2013	International Entrepreneurship and Management Journal	Work context and employee behaviour as antecedents for intrapreneurship	This paper therefore takes a bottom-up approach and focuses on employee behaviour and how it can be stimulated towards intrapreneurship.
	Turro, A., Noguera, M. and Urbano, D.	2020	International Journal of Entrepreneurial Behaviour and Research	Antecedents of entrepreneurial employee activity: does gender play a role?	To examine the extent to which the antecedents of entrepreneurial employee activity differ by gender across countries.
	Wright, M; Hmieleski, KM; Siegel, DS; Ensley, MD	2018	Entrepreneurship: Theory and Practice	The role of human capital in technological entrepreneurship	To address the role that the human capital characteristics of individuals and teams play in the complex process of technological entrepreneurship.
Dynamic Capabilities	Agca, V; Topal, Y; Kaya, H	2012	International Entrepreneurship and Management Journal	Linking intrapreneurship activities to multidimensional firm performance in Turkish manufacturing firms: An empirical study	This study investigates the relationships among the external environment, intrapreneurship and performance of Turkish manufacturing firms.
	Ahsan, M. and Fernhaber, S.A.	2019	Journal of International Management	Multinational enterprises: Leveraging a corporate international entrepreneurship lens for new insights into subsidiary initiatives	To identify a set of opportunity phenotypes for subsidiary initiatives based on their market focus as well as the knowledge and capabilities leveraged to identify and exploit the opportunity.
	Alpkan, L; Bulut, C; Gunday, G; Ulusoy, G; Kilic, K	2010	Management Decision	Organizational support for intrapreneurship and its interaction with human capital to enhance innovative performance	To investigate the direct and interactive effects of organizational support and human capital on the innovative performance of companies.
	Altinay, L	2004	International Journal of Service Industry Management	Implementing international franchising: The role of intrapreneurship	The intrapreneurial role of organizational members in implementing franchising decisions in an international hotel group was investigated.

Antoncic, J.A. and Antoncic, B	2011	Industrial Management and Data Systems	Employee satisfaction, intrapreneurship and firm growth: A model	The purpose of this study is to focus on employee satisfaction, intrapreneurship and firm growth.
Arend, R.J	2014	Small Business Economics	Entrepreneurship and dynamic capabilities: How firm age and size affect the 'capability enhancement-SME performance' relationship	To determine whether entrepreneurial ventures have dynamic capabilities, and, if so, whether differences in the characteristics of those ventures lead to differences in how dynamic capabilities benefit firm performance.
Benitez-Amado, J., Llorens-Montes, F.J. and Nieves Perez-Arostegui, M.	2016	Industrial Management & Data Systems	Information technology-enabled intrapreneurship culture and firm performance	The purpose of this paper is to analyse the relationships between two types of information technology (IT) resources (technological IT and managerial IT resources), the intrapreneurship culture and firm performance.
Haase, H., Franco, M. and Félix, M	2015	Leadership and Organization Development Journal	Organisational learning and intrapreneurship: evidence of interrelated concepts	The purpose of this paper is to explore in depth the interface between organizational learning and intrapreneurship.
Lages, M., Marques, C.S., Ferreira, J.J.M. and Ferreira, F.A.F.	2017	International Entrepreneurship and Management Journal	Intrapreneurship and firm entrepreneurial orientation: insights from the health care service industry	The approach has focused on the identification, analysis and explanation of the determinants/variables that influence the intrapreneurship process in the health-care service industry, including the private, public and social sectors.
Lim, E. and Kim, D.	2020	Entrepreneurship Research Journal	Entrepreneurial Orientation and Performance in South Korea: The Mediating Roles of Dynamic Capabilities and Corporate Entrepreneurship	To investigate the effect of entrepreneurial orientation (EO) on firm performance by considering the roles of dynamic capabilities (DC) and corporate entrepreneurship (CE).
O'Connor, G.C., Paulson, A.S. and Demartino, R.	2008	International Journal of Technology Management	Organisational approaches to building a radical innovation dynamic capability	The study reported on in this paper is a longitudinal study conducted over a period of 3.5 years, in which 12 US large established companies' radical innovation-capability-building initiatives were followed.
Parker, S.C.	2011	Journal of Business Venturing	Intrapreneurship or entrepreneurship?	To analyse factors that determine whether new business opportunities are exploited by starting a new venture for an employer ("nascent intrapreneurship") or independently ("nascent entrepreneurship").
Skarmeas, D., Lisboa, A. and Saridakis, C	2016	Journal of Business Research	Export performance as a function of market learning capabilities and intrapreneurship: SEM and FsQCA findings	This study draws on the resource-based, dynamic capabilities and organization learning theories to investigate the internal mechanisms through which intrapreneurship influences current and future export performance.
Rigtering, J.P.C.C., Weitzel, G.U.U. and Muehlfeld, K.K.	2019	Journal of Business Venturing	Increasing quantity without compromising quality: How managerial framing affects intrapreneurship	To theorize how different ways of inviting employees to submit proposals (opt-out/opt-in registration; provision of examples) affect the number and quality of submitted ideas.
Teece, D.J.	2016	European Economic Review	Dynamic capabilities and entrepreneurial management in large organizations: Toward a theory of the (entrepreneurial) firm	To better understand the relationship between entrepreneurial management and organizational capabilities.
Toledano, N., Urbano, D. and Bernadich, M.	2010	Journal of Organizational Change Management	Networks and corporate entrepreneurship: A comparative case study on family business in Catalonia	To analyse in depth collaboration as a process that emerges from interactions among individuals in order to develop entrepreneurial actions within established family firms.

	Turro, A., López, L. and Urbano, D.	2013	European Journal of International Management	Intrapreneurship conditioning factors from a resource-based theory	To analyse from a resource-based theory companies' resources and capabilities that condition intrapreneurship.
	Wilden, R., Gudergan, S.P., Nielsen, B.B. and Lings, I.	2013	Long Range Planning	Dynamic Capabilities and Performance: Strategy, Structure and Environment	To argue theoretically and demonstrate empirically that these effects are contingent on organizational structure and the competitive intensity in the market.
	Yiu, D.W., Lau, C.M. and Bruton, G.D.	2007	Journal of International Business Studies	International venturing by emerging economy firms: The effects of firm capabilities, home country networks, and corporate entrepreneurship	This paper introduces new parameters by focusing on specific ownership advantages and strategic actions that firms have to develop in response to the institutional characteristics of the emerging economies when they decide to pursue outward FDI.
Institutional Economics	Ahmad, SZ; Ahmad, N; Abu Bakar, AR	2018	Telematics and Informatics	Reflections of entrepreneurs of small and medium-sized enterprises concerning the adoption of social media and its impact on performance outcomes: Evidence from the UAE	This study fills the gap by looking at the adoption of social media among small and medium-sized enterprises (SMEs) in the Middle East region, specifically in the UAE.
	Alshumaimri, A; Aldridge, T; Audretsch, DB	2010	The Journal of Technology Transfer	The university technology transfer revolution in Saudi Arabia	The paper explains and identifies the new policies and institutions that have been introduced and developed to facilitate technology transfer and knowledge spillovers from the universities for commercialization and ultimately innovative activity and economic growth.
	Antoncic, B.	2007	Industrial Management & Data Systems	Intrapreneurship: A comparative structural equation modeling study	This study aims to examine both the patterns of relationships and the levels (means) across two countries (the USA and Slovenia) by testing two models.
	Berzin, S., Pitt-Catsoupes, M. and Gaitan-Rossi, P.	2016	Human Service Organizations Management, Leadership and Governance	Innovation and Sustainability: An Exploratory Study of Intrapreneurship Among Human Service Organizations	Changes in the social, economic and political environment have led to an increasing focus on sustainability and innovation for human service organizations. Interviews with 23 human service leaders found that changes in the needs of target populations along with financial pressures were primary motivators for innovation.
	Gomez-Haro, S., Aragón-Correa, J.A. and Córdón-Pozo, E.	2011	Management Decision	Differentiating the effects of the institutional environment on corporate entrepreneurship	The main purpose of this paper is to contribute to a better understanding of how different dimensions of the institutional environment of a region may influence the level of corporate entrepreneurship of firms.
	Hughes, M. and Mustafa, M.	2017	Journal of Small Business Management	Antecedents of corporate entrepreneurship in SMEs: Evidence from an emerging economy	To argue that contextual factors may undermine the viability of internal antecedents in emerging economy contexts.
	Javalgi, R.G. and Todd, P.R.	2011	Journal of Business Research	Entrepreneurial orientation, management commitment, and human capital: The internationalization of SMEs in India	This research extends the literature addressing the relationships surrounding the internationalization of SMEs in India as related to entrepreneurial behaviour, firm

				resources and commitment to internationalization.
Jiao, H., Alon, I., Koo, C.K. and Cui, Y.	2013	Journal of Engineering and Technology Management	When should organizational change be implemented? the moderating effect of environmental dynamism between dynamic capabilities and new venture performance	The purpose of this study is to explore the moderating effect of environmental dynamism on the relationship between dynamic capabilities and new venture performance using the rapidly changing environment in China as a case.
Khorsheed, M.S. and Al-Fawzan, M.A.	2014	Innovation: Management, Policy and Practice	Fostering university-industry collaboration in Saudi Arabia through technology innovation centers	This paper proposes a new model for university-industry collaboration that targets combining academic and industrial resources to conduct research and development focused on industry-oriented problems and innovation and, additionally, educating a workforce capable of advancing national technological and economic goals.
Ma, X., Ding, Z. and Yuan, L.	2016	Journal of World Business	Subnational institutions, political capital, and the internationalization of entrepreneurial firms in emerging economies	To investigate the integrative influence of subnational-level home country institutional environments and firm-level political capital, as an important way to seek resources, on emerging economy entrepreneurial firms' internationalization.
Majumdar, S.K.	2007	Entrepreneurship: Theory and Practice	Private enterprise growth and human capital productivity in India	This article examines patterns of growth in private firms and private equity investment and in the decline in state-owned firms and equity capital within the corporate sector in Indian industry over a 25-year period.
Moser, S., Swain, M. and Alkhabbaz, M.H.	2015	Cities	King Abdullah economic city: Engineering Saudi Arabia's post-oil future	To examine how the Saudi state seeks to reinvent itself through the construction of new cities and the recent pivot towards economic liberalism.
Rahman, M.M.	2018	International Sociology	Beyond labour migration: The making of migrant enterprises in Saudi Arabia	Drawing on the experiences of Bangladeshi migrant entrepreneurs in Saudi Arabia, this article explores the dynamics of Gulf migration, by identifying the transition from migrant worker to migrant entrepreneur and explaining the making of migrant entrepreneurship within the temporary migration process.
Turro, A., Alvarez, C. and Urbano, D.	2016	Entrepreneurship and Regional Development	Intrapreneurship in the Spanish context: a regional analysis	To examine the influence of internal and external (environmental) factors on intrapreneurship in the Spanish context, considering differences among regions.
Urbano, D. and Turro, A.	2018	International Entrepreneurship and Management Journal	Conditioning factors for corporate entrepreneurship: An in(ex)ternal approach	To identify which internal and external factors condition corporate entrepreneurship.