# IMPACT OF CORPORATE ENTREPRENEURSHIP ENVIRONMENT ON ENTREPRENEURIAL INTENTIONS, ORGANISATIONAL COMMITMENT, AND SELF-EFFICACY OF PRIVATE SECTOR EMPLOYEES IN UAE

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### **Abstract**

#### **Aston University**

Impact of corporate entrepreneurship environment on entrepreneurial intentions, organisational commitment, and self-efficacy of private sector employees in UAE.

Abdulsalam Aidaros Mohammed Al Khulaifi Doctor of Business Administration 2024

The aim of this thesis is to assess the effects of corporate entrepreneurship (CE) environment on entrepreneurial intentions (EI), self-efficacy (SE), and organisational commitment (OC) of private sector professionals in Abu Dhabi. The phenomenon of corporate entrepreneurship, when employees working for a corporation are given projects that they are allowed to run as their own business has gained popularity in the Western developed countries but is only gaining momentum in emerging economies of the Middle East. This study is set in the context of Abu Dhabi, one of the least diversified emirates highly dependent on the production of oil, where most of the local residents are employed in the public sector. The study intends to raise interest in the private sector development in Abu Dhabi and explore the ways that can effectively facilitate this development through nurturing corporate entrepreneurship and entrepreneurial orientation. The aim of the thesis is pursued using the method of multiple linear regression analysis applied to primary data gathered in a survey of private sector managers and employees working in Abu Dhabi. Out of 3,000 questionnaires distributed, the final number of 497 usable responses has been attained. The questionnaire items are based on previously validated scales, which allows for measuring the constructs of CE environment, EI, SE and OC. The Confirmatory Factor Analysis (CFA) with Cronbach's alpha is applied to for internal reliability testing and the latent factors derived from the measurement model are then analysed using multiple linear regressions. The findings show that the direct effects of CE environment on EI, OC and SE are supported in this study, which confirms previous theories. Work Autonomy is the only component of CE environment that significantly and positively affected EI, OC, and SE. In contrast, Rewards in the CE environment produced a significant positive impact only on SE, which can be explained by the psychological treatment of Rewards as measures of one's performance at work by employees. Management Support may facilitate greater commitment to the organisation and even the growth EI, but employees would treat excessive Management Support as a sign of their own inability to work and resolve tasks independently, which is why it hurts SE.

The research has also evidenced a statistically significant mediating role played by entrepreneurial orientation in channelling the effects from CE to OC, EI, and SE. Furthermore, individual characteristics such as well-being and hyperactivity produce significant effects on the links between CE and the outcome variables. Among the individual characteristics, only fear of failure was not supported as a valid moderator. These findings are important for policy makers and corporate decision-makers as they shed light on how to improve the commitment of employees to the company. Furthermore, the findings may help organisations to understand how they can raise future leaders and entrepreneurs by nurturing greater work autonomy, providing supporting to employees and offering more time availability. The results are limited by the focus on a single emirate and the private sector only, which limits the generalisability of results. Future studies are recommended to expand the scope of the research and test the relationships in new contexts, to use structural equation modelling (SEM) technique, and to address potential endogeneity issues.

Keywords: Entrepreneurial orientation, Corporate entrepreneurship, Entrepreneurial intentions, Self-efficacy, Organizational commitment, Private sector professionals, UAE, Abu Dhabi, Well-being, Hyperactivity, Fear of failure.

# Dedication

My family's love and support have been my biggest source of inspiration, and this achievement is not just mine as I could not have reached this point without their support.

For that, I would like to dedicate this thesis to my parents, who taught me the importance of persistence and hard work. I am grateful for their belief in my ambitions and for their prayers that have accompanied me on this path. Their constant support and motivation have been fundamental to my academic pursuit and provided me with the strength I needed during the challenging times.

I also wish to dedicate this work to my partner, whose love and patience have been my anchor. Your understanding during late nights and stressful days have played a crucial role in making this accomplishment a reality. This thesis stands as a compliment to your love and the countless ways you have helped me grow and for that I am deeply grateful.

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# **Chapter 1: Introduction**

Corporate entrepreneurship (CE) has been regarded as a key form of corporate innovation (Kuratko et al., 2014; Jabeen et al., 2019). It represents an organisational strategy aimed at nurturing entrepreneurial behaviour of employees within the company to stimulate innovations. The factors that facilitate corporate entrepreneurship are referred to as corporate entrepreneurship environment (Ghura et al., 2023). Creating a healthy CE environment allows companies to raise innovative leaders and become more competitive in the quickly changing, dynamic environment. Corporate entrepreneurship environment encourages employees to take more risks, gain more autonomy, and be more innovative (Burger and Blažková, 2020). This can be reflected in allocating new projects to employees that they can run as their own business, but within the context of the same organisation where they work (Funko et al., 2023). While employees learn entrepreneurial skills, the organisation is able to probe different market niches with new products and services. In contrast to running an individual business on their own, employees would still have access to resources of the company and organisational support. Having effective incentives and rewards mechanisms within the company is essential for inducing innovativeness and fostering entrepreneurial spirit among employees (García and Herrero, 2022).

Entrepreneurship literature has been investigating entrepreneurs' actions, associated outcomes, and motivation behind entrepreneurship (Douglas, 2020). However, researchers have emphasised that there is a need for an integrated understanding of the entrepreneurial mindset (Daspit et al., 2021). Established research appears to be fragmented in the sense that entrepreneurship is understood as a 'constellation' of thought processes, skills, and strategies and there is no clarity on the relationships between CE environment, entrepreneurial orientation (OE), and entrepreneurial intention (EI) of employees working in the CE environment. While CE environment creates the conditions that facilitate the specific implementation of the firm's strategy to engage employees in entrepreneurial activities giving them more freedom, initiative and control over the projects they run, entrepreneurial orientation can be seen as the mindset and determination of employees to be innovative and entrepreneurial (Tajeddini et al., 2023; Huang et al., 2023). Entrepreneurial intention is an even narrower concept compared to CE and OE as it is limited to the scope of a single individual and represents the individual's willingness to be an entrepreneur or act like an entrepreneur within the organisation (Martínez-Cañas et la., 2023; Bu et al., 2023).

In general, the subject of entrepreneurship research can be divided into three main categories, namely: what entrepreneurs do, the outcomes of entrepreneurs' actions, and what motivates individuals to become entrepreneurs (Vincent et al., 2023; Su et al., 2023). In the first category, previous studies explored various patterns of behaviour of entrepreneurs including their

compliance or non-compliance with regulations and tax laws (Vincent et al., 2023), their ability to adjust to the external environment and build trust with stakeholders, their ability to recover from violations of trust compared to people without entrepreneurial background (Bi et al., 2021), and their behaviour in relation to sustainability and natural environment (De Bernardi and Pedrini, 2020). In the second category, previous studies explored the effects of entrepreneurs' actions on the financial performance of companies (Schmidt et al., 2022; Su et al., 2023), the level of innovativeness of the business and service quality (Hoang et al., 2022). strategic choices at the industry level (Gilbert-Saad et al., 2023), and socio-economic effects on the labour market (Dagnelie et al., 2019) and on macroeconomic development (Ordeñana et al., 2023; Tahir and Burki, 2023). In the third category, previous research focused on various determinants of entrepreneurial behaviour, such as business education, availability of skills necessary to start a business, the ability to find and capture new opportunities, previous experience in the field, expertise, and intentions (Adeel et al., 2023). Furthermore, this category includes factors, such as financial motives, intrinsic motives, and identity congruence, that motivate individuals to become entrepreneurs or act as entrepreneurs within an organisational context (Murnieks et al., 2019).

The present study contributes to the third category by examine the CE environment as a key factor contributing not only to entrepreneurial intentions (EI) of employees but also their organisational commitment (OC) and self-efficacy (SE). It has been noted that the existing literature on this topic is limited when it comes to describing EI in terms of both firm-level and individual characteristics at the same time (Sakhdari, 2016; Douglas, 2020), with most of the studies focusing either on corporate antecedents of El such as organisational support and rewards system (Meynhardt and Diefenbach, 2012; Jong et al., 2015; Kashmoola et al., 2017), or individual norms, beliefs, and preferences (Khalifa and Dhiaf, 2016; Al Saigal et al., 2019; Nowiński and Haddoud, 2019; Jabeen et al., 2019; Eid et al., 2019). Finally, few studies have explored how EI may be affected by country-level differences such as the differences in the ease of doing business, technological development and infrastructure, as well as cultural factors (Chowdhury and Maung, 2013; Yoo et al., 2018; Elnadi et al., 2020). At the same time, there are several gaps in previous research. First, no studies considered CE environment as an antecedent of EI, SE and OC, and this research fills this gap by providing a holistic conceptual model which extends the previously known effects of the CE environment. Second, another gap in previous research is the limited evidence on indirect effects of the CE environment, and this study fills this gap by introducing the mediating effect and hypothesising that CE environment will affect EI not only directly but also indirectly through the channel of entrepreneurial orientation (EO). Third, there is no evidence in literature on how the CE environment affects EI, SE, and OC in the context of Abu Dhabi, where the private sector has

to compete for human resources with the large oil and gas industry that attracts talents. Thus, the present study attempts to address some of these gaps and provide knowledge that may be relevant for researchers, policymakers, and managers in private organisations. Instead of the siloed approach used by previous studies, which focused on specific types of determinants of EI, SE, or OC, this research takes a holistic view of the issue and attempts to build and test a framework that would provide a more comprehensive view on the effects of the CE environment and its ability to explain not only entrepreneurial intentions but also organisational commitment and self-efficacy of employees working in the private sector of Abu Dhabi, a UAE emirate.

#### 1.1. Background and Context

This study is set in the context of Abu Dhabi, the largest and richest emirate of the UAE (Telci, 2022). The country enjoys the second largest economy in the Middle East, after the Kingdom of Saudi Arabia with the annual GDP of \$507 billion as of 2022 (World Bank, 2023). While some emirates such as Dubai have succeeded in diversifying the economy, Abu Dhabi remains heavily dependent on revenue from oil exports (Antwi-Boateng and Jaberi, 2022). As of 2022, fuel exports constituted around 46% of GDP of the UAE (UN Comtrade, 2023), suggesting that the economy needs more diversification to achieve sustainability of the economy in the long-term and reduce the risks associated with the potential changes in the global demand for fossil fuels as advanced economies focus on alternative green sources of energy.

In order to achieve greater diversification of the economy, Abu Dhabi will need to foster entrepreneurship and innovation (El Anshasy and Khalid, 2023). Mohammed (2019) showed that entrepreneurial intentions of young people in Abu Dhabi were strongly affected by the support they received at educational institutions, family and peers and the government. In line with this, the government of the UAE have been focusing on promoting STEM education to foster entrepreneurship, technological innovations and research and development (R&D) that will help shape the future of the emirates (Ibrahim et al., 2023).

The private sector of the UAE has peculiarities. While it accounts for the employment of 70.7% of the total workforce, most of the employees are non-emiratis. Only around 8% of the local emirati nationals work in the private sector (The UAE Government Portal, 2023a). Such a segregation of the workplace stems from the pay inequalities and more attractive working conditions in the public sector, which is dominated by the oil industry (Facchini et al., 2021). As a result, the local residents are not willing to transition to the private sector, but the latter is attractive for immigrants such as those from India, the major trade partner of the UAE, as they find the conditions more attractive compared to their home country. The high participation of non-emiratis in the private sector is also explained by the numerous free zones established in

the UAE, which provide tax incentives and low regulatory requirements for foreign private businesses (Mogielnicki and Mogielnicki, 2021). This facilitates foreign direct investment (FDI) inflows into the country, which grew by 10% in 2022 compared to the previous year and reached \$22.7 billion or 4.5% of GDP in 2022 (The UAE Government Portal, 2023b). FDI brings innovations, attracts human capital, and imports new organisational culture and new ideas.

Due to the favourable conditions and ease of doing business, by which the UAE has been ranked the 16<sup>th</sup> in the world (Trading Economics, 2024), the number of private sector enterprises has been on a rise. The number of small and medium enterprises (SMEs) has reached 557,000 by 2023 and this number is expected to grow to 1 million by 2030 resulting in a cumulative growth of around 8.7% a year (Sharma, 2023). Along with SMEs, the number of large listed companies has also been increasing in the UAE, especially in the post-pandemic period (Figure 1).

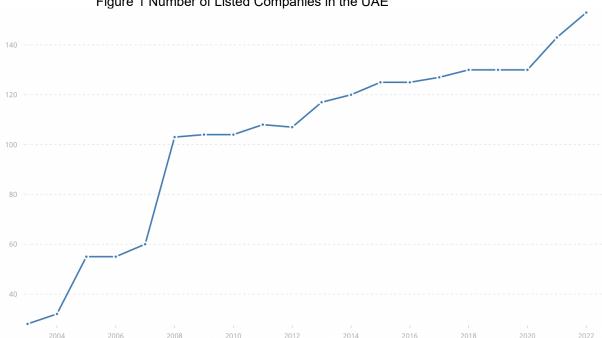


Figure 1 Number of Listed Companies in the UAE

Source: World Bank (2024)

While the UAE policy makers have been trying to expand the diversification of the economy and increase the role of the private sector, there is still relatively little interest from the locals to engage in entrepreneurial activities as a recent study conducted by Facchini et al. (2021) has shown. They conducted a survey among students in the UAE in order to assess their entrepreneurial intentions, and the results demonstrated that the respondents predominantly intended to work in the public sector, which was believed to be more prestigious and less risky. The researchers conclude that such weak entrepreneurial intentions among the emirati

nationals are explained by culture, which is not unique to the UAE but is similar among many rentier states (Facchini et al., 2021). Changing this culture to embrace entrepreneurship requires not only transformation of the education but also nurturing corporate entrepreneurship environment.

Even though some of the recent academic studies report that regulatory restrictions are viewed by businesses as obstacles and challenges for effective performance in the UAE (Yasin et al., 2021), the country is ranked the highest among the Gulf nations at ease of doing business with statistics highlighted above (World Bank, 2020). This allows for stating that it is the internal factors such as the lack of strong entrepreneurial intentions in the country rather than external barriers that prevent the effective diversification of the UAE economy and development of the private sector.

The relevance of the UAE case in the context of entrepreneurship is the country's recent shift from an oil-driven economy towards a more diversified revenue stream in the long run. The government launched initiatives that were aimed at improving workforce participation of national population and enhancing available career opportunities (Tipu and Ryan, 2016; Yoo et al., 2018; Al Saiqal et al., 2019). The key initiative is the UAE Vision (Ahmed et al., 2022) that emphasises the role of innovation as a key driver of a sustainable and diversified economy. These considerations highlight the rising role of entrepreneurship in the UAE which makes the country a natural case to explore in the context of El drivers. Since this thesis focuses on CE, exploring the decision-making of the UAE nationals will provide valuable insight on El. This may also provide more insight on the role of cultural dimensions in fostering El (Zeffane, 2013; Bogatyreva et al., 2019). Existing research on entrepreneurship in the UAE is limited. Some of the studies that covered El in the context of the UAE, such as Al Saiqal et al. (2019), have shortcomings, as they often consider individual entrepreneurship and do not account for the CE environment.

Overall, because of the features that were discussed, the UAE is an interesting case to explore in the context of entrepreneurship and career choices. From the policy perspective, this research value is further enhanced by the low engagement of nationals in the private sector and lack of empirical research on the UAE case.

#### 1.2. Rationale and Justification of Research

The main motivation for the study is the lack of empirical research that could help inform the decisions of UAE policymakers and managers when it comes to fostering innovation and entrepreneurship in the country. To ensure the country's long-term stability, the UAE government has been aiming its resources and economic policies on diversifying and restructuring the economy as proposed in the Vision 2021. This includes implementing

government policies in the labour market, and that touch upon the organisational commitment and entrepreneurial intentions of the employees. However, as already discussed, the engagement of UAE nationals in the private sector is still low which makes the application of the vast entrepreneurship literature problematic due to its focus on private companies. The research that has been conducted in the UAE has been mostly using samples of students which might not be representative of the population of individuals who have already made steps toward entrepreneurial activities (Facchini et al., 2021; Al Saiqal et al., 2019). There is also a need for an integrated approach to research that would account for both firm-level and individual-level antecedents of entrepreneurship among employees.

The considerations above justify the present work's focus on CE environment as a form of innovation in private entities in the UAE. This should allow for informing UAE policymakers on the role of CE in realising the vision of UAE and ensuring that future policies and initiatives do not ignore the complex relationships between corporate entrepreneurial environment and entrepreneurial mindsets of the individual employees and their commitment towards their organisations. This includes helping inform the policies of the oil-rich Middle East governments, the UAE, and Abu Dhabi in particular to ensure that employees are motivated and supported in their entrepreneurial activities which should enhance innovation and organisational commitment in the company. A related motivation towards conducting this study is to investigate the determinants of organisational commitment and EI from a CE perspective in order to assist private sector organisations.

### 1.3. Aim and Objectives

The main aim of this research is to assess the effects of corporate entrepreneurship (CE) environment on entrepreneurial intentions (EI), self-efficacy (SE), and organisational commitment (OC) of private sector professionals in Abu Dhabi. This aim is achieved by following several objectives:

- To examine the direct effects of corporate entrepreneurship environment on organisational commitment, self-efficacy and entrepreneurial intentions of employees in Abu Dhabi;
- To estimate the indirect effects of corporate entrepreneurship environment mediated through entrepreneurial orientation on the organisational commitment, self-efficacy and entrepreneurial intentions of employees in Abu Dhabi;
- To assess how the factors of well-being, fear of failure, and hyperactivity moderate the effect of corporate entrepreneurship environment on the organisational commitment, self-efficacy and entrepreneurial intentions of employees in Abu Dhabi.

#### 1.4. Research Gaps and Contribution

While pursuing the above objectives, this thesis makes contributions to the existing literature in several ways. Firstly, the findings will provide evidence on how the effects of firm-level antecedents of EI may be influenced by individual characteristics of employees, which has received little attention from academics (Bazkiaei et al., 2020; Loosemore et al., 2022). Secondly, the results will contribute to the literature on the antecedents of OC as previous studies have mostly focused on the individual drivers of OC, such as job satisfaction of employees and employee engagement (Bashir and Gani, 2020), and there is limited research on the role of the CE environment in explaining OC. Finally, this thesis provides empirical evidence on the EI antecedents of UAE employees rather than students, in contrast to previous research (Al Saigal et al., 2019). This has greater relevance for decision-makers.

The explored relationships between the studied constructs are visualised in the simplified version of the conceptual framework, which is further elaborated in more detail in subsequent chapters.

Corporate
Entrepreneurial
Organisational
Commitment

Self-efficacy

Figure 2 Overview of Constructs

Source: author

The existing body of literature has certain gaps when it comes to the field of CE mediated by EO, and how it impacts EI and OC of employees. The first gap exists in the fact that the reviewed studies have not explicitly investigated how EI and OC of individuals may be driven by both CE environment and individual factors simultaneously. This reflects a more general tendency of academic literature to focus on either individual factors or firm-level factors (Sakhdari, 2016; Gümüsay and Bohné, 2018; Douglas, 2020). The second gap revealed by the literature review is that the studies examining the link between CE and OC have been

largely focusing on the antecedents of CE (Farrukh et al., 2017; Boatemaa et al., 2019). However, it has been suggested that the process of fostering the CE environment is a reinforcement feedback loop, which implies that enhancing CE could strengthen employees' commitment to the organisation (Shepherd et al., 2010). For this reason, this thesis makes a contribution to knowledge by examining the direct and indirect effects of CE on OC.

The third gap in current literature is the lack of empirical evidence on EI and CE in the Middle East region. There is a general lack of comprehensive geographical coverage in empirical entrepreneurship literature on emerging economies (Popowska, 2020; Mendoza et al., 2021). A few studies that examined entrepreneurship in the UAE or other emerging countries focused on the economic aspects of CE rather than individual EI and OC (Rodrigues, 2010; Chowdhury and Maung, 2013). Finally, it seems that there is little research on the moderating effects of well-being, fear of failure, and hyperactivity on the relationships between CE, EI, OC, and EO. Since these psychological characteristics seem to be linked to multiple aspects of the entrepreneurial process, it can be expected that well-being, fear of failure, and hyperactivity influence decision-making not only through the EO pathway but also by enhancing or impairing the outcomes of firm-level entrepreneurial environment captured by CE. Overall, there is a gap in the established literature on the impact of well-being, fear of failure, and hyperactivity on the linkages between CE, EI, EO, and OC. This gap is filled by this thesis in the context of Abu Dhabi.

A major strength of the present study is its comprehensive approach to explaining the pathways through which CE may affect EI, OC, and SE. Existing research tends to focus on a single link, which limits the ability to comprehend how CE shapes individuals' perceptions, intentions, and behaviour (Ma and Huang, 2020; Twum et al., 2021; Boatemaa et al., 2019; Niemann et al., 2022). In particular, the present study considers EO as a mediator rather than an outcome variable, which may help better understand how organisational changes in CE that influence EO could affect EI, OC, and SE. Combining several major pathways that have been separately explored in the previous literature into a single model allows us to explicitly compare the role of key individual-level variables. Another strength of our study is that it highlights the role of individual EO. Existing research has tended to focus on managerial or organisational-level EO, ignoring potential linkages between CE environment, individual EO, and outcomes such as EI, OC, and SE (Covin et al., 2020). This allows us to investigate CE as a bottom-up phenomenon and explore how CE environment translates into behavioural intentions, perceptions, and beliefs through EO mediation.

The study's comprehensiveness is further reflected in the inclusion of several individual-level moderation effects, namely fear of failure, hyperactivity, and well-being. No previous research appears to exist that would have examined the combination of these moderators in the context

of entrepreneurship (Shir and Ryff, 2022; Hatak et al., 2021; Hunter et al., 2021; Duong, 2022). The key strength of our approach is that it allows for more accurately describing the pathway through which CE affects EI, OC, and SE. This becomes especially relevant when considering that some of the moderators, namely fear of failure and hyperactivity, have been reported to have both positive and negative effects on EI and entrepreneurial behaviour (Antshel, 2018; Yu et al., 2021; Stappers and Andries, 2022; Cacciotti et al., 2016; Kong et al., 2020; Hunter et al., 2021; Duong, 2022). Our study will provide more insight on the interaction of psychological factors and intentions on the individual level, and CE environment at the organisational level.

Previous literature has noted that certain individual-level variables such as individual EO, EI, fear of failure, and well-being, are affected by the socioeconomic and cultural environment (Wennberg et al., 2013; Cacciotti et al., 2016; Chowdhury et al., 2019; Bogatyreva et al., 2019; Facchini et al., 2021). At the same time, existing studies have generally focused on developed countries. Our study addresses this gap by examining the context of a developing economy. This allows us to better understand whether theoretical frameworks that have been largely developed in the context of Western countries are still applicable to the case of developing and emerging economies, in particular those from the MENA region such as UAE. The model we use in the present study explicitly accounts for psychological factors, which could in part be driven by the cultural context of the region. Research on such factors as ADHD and well-being in entrepreneurship is still in its nascence, and it is important to inform future research from early stages by providing evidence on different socio-economic and cultural environments.

Based on the identified limitations of previous literature, the following directions of research can be explored. It can be valuable to investigate how individual EI and OC are impacted by CE environment in private enterprises, while being mediated by EO, and moderated by gender, well-being, fear of failure, and hyperactivity. This is examined in this thesis. It explores which particular dimensions of corporate entrepreneurship have the most significant influence on entrepreneurial intentions and organisational commitment of employees in the context of the UAE using a sample of professional employees from both public and private sectors. This allows for making relevant recommendations on how exactly the corporate entrepreneurship environment should be fine-tuned by organisations in both sectors, in the context of an emerging market, to retain the innovative staff and minimise the risk of their departure from the entities they work for.

#### 1.5. Thesis Structure

The rest of the thesis provide a review of literature and theories on corporate entrepreneurship as well as factors such as entrepreneurial intentions, self-efficacy, organisational commitment, and entrepreneurial orientation in Chapter 2. Then, the research methodology and data are discussed in Chapter 3 where the design of the study and methods of analysis are presented. Chapter 4 demonstrate the findings and results where the key outcomes from data analysis are evaluated and interpreted. Chapter 5 contains final conclusions on how CE environment influences entrepreneurial intentions, self-efficacy, and organisational commitment of private sector professionals in Abu Dhabi, accounting for limitations of the research, comparing the results to previous literature and making recommendations for future studies. This chapter also demonstrate practical implications and contributions of the thesis.

# Chapter 2: Literature Review

This chapter provides a review of academic studies on corporate entrepreneurship, organisational commitment, self-efficacy, entrepreneurial orientation, and entrepreneurial intentions. The review includes conceptual discussions, theoretical discussions, and empirical evidence. The conceptual discussion focuses on the definition and formulation of the concepts employed in this thesis. The theoretical discussion provides a review of relevant theories that explain the relationships between the presented concepts. The empirical part of the literature review facilitates the hypothesis formulation based on the available evidence that previous researchers uncovered in the context of CE, EI, OC, SE, and EO.

### 2.1 Concept of Corporate Entrepreneurship (CE)

Corporate entrepreneurship (CE) is understood as firm-level entrepreneurship. In other words, it is risk-taking innovative behaviour undertaken by managers and employees (Douglas, 2020). In general, entrepreneurship may be influenced by a variety of external, firm-level, and individual-level factors which are not under the direct control of managers. In contrast, CE environment can be adjusted by managers depending on the innovation, entrepreneurship, and commitment goals (Kuratko et al., 2015). The broader environment of CE is comprised of the organisational culture, management support of employees, work autonomy of employees, organisational structure, control and incentives mechanisms of governance, monetary and non-monetary rewards to employees and partnerships with external stakeholders. These dimensions of CE environment help predict which employees will have a higher chance to exhibit entrepreneurial behaviour, who will have higher entrepreneurial intentions and whether this will conflict with the commitment to the organisations. By changing the current conditions of work environment, managers may be able to influence how employees perceive risks and costs associated with entrepreneurial activities (Pinzón et al., 2021).

Several key dimensions of CE environment have been distinguished in previous literature. These include support of top managers, work autonomy, rewards and reinforcement, and time availability (Sakhdari, 2016). These dimensions can help entrepreneurs identify, evaluate and explore opportunities, as suggested by the Entrepreneurial Spiral Theory of Shepherd et al. (2010). This theory is based on the framework of cultural psychology and describes the relationship between the managers' entrepreneurial mindset and organisational culture as a deviation-amplifying process. According to this theory, entrepreneurship is a dynamic, iterative process that evolves through several stages, namely: identification of new opportunities, evaluation of new opportunities, exploitation of the opportunities and knowledge accumulation as a result of the exploitation of the opportunities. In the context of CE, workers with the entrepreneurial spirit can identify new opportunities through their experience with the company

in which they work and communication with stakeholders of the company. Time availability and work autonomy can help provide them with sufficient time and resources to evaluate new opportunities and exploit them, which will lead to human capital creation. The amplifying nature of this relationship means that there is a feedback loop. This framework helps integrate the viewpoints of an entrepreneurial organisation and an entrepreneurial mindset and provides a multi-level perspective on entrepreneurship that captures the dynamic nature of the underlying relationships. A similar approach was adopted by Badoiu et al. (2020) who considered a model of bottom-up relationships between CE and entrepreneurial behaviour at the individual level.

#### 2.2 Concept of Entrepreneurial Orientation (EO)

Entrepreneurial orientation (EO) is a key antecedent of organisational success according to resent research (Bernoster et al., 2020). In general, EO can be defined as tendency towards innovative, risk-taking, and proactive decision-making (Kollmann et al., 2017). This definition captures the role of experimenting with new ideas, recognising opportunities, and taking risks in entrepreneurial success. EO has been linked to a variety of firm-level and individual factors including innovation, market circumstances, organisational design, creativity, self-evaluation, narcissism, and overconfidence (Covin et al., 2020).

EO is captured by several key dimensions found in literature, which include proactiveness, innovativeness, competitive aggressiveness, autonomy, and risk taking (Miller, 1983; Bolton and Lane, 2012). While it is usually measured at the firm level, recently more attention has been given to individual EO (Kollmann et al., 2017; Covin et al., 2020). This approach can be linked to the Upper Echelon Theory, which posits that organisational outcomes are influenced by managerial characteristics which implies that both firm-specific traits and individual-level traits could impact firm decision-making (Hambrick and Mason, 1984; Bernoster et al., 2020). In particular, gender may influence how CE environment translates into entrepreneurial outcomes (Minniti and Nardone, 2007). Women's employment choices may be more sensitive to the local environment and non-monetary incentives such as time- and location flexibility.

While most of the research on individual EO has been focusing on the personality traits and entrepreneurial attitudes (Bolton and Lane, 2012; Palmer et al., 2019), the theories of social exchange, extra-role behaviour, and citizenship behaviour further suggest that the EO of individual organisational members may be a result of reciprocation for positive relationships held with managers (Covin et al., 2020).

#### 2.3 Concept of Entrepreneurial Intention (EI)

Entrepreneurial intention (EI) is understood as an intention to engage in entrepreneurial activities such as starting up a new venture (Liñán and Chen, 2009). Four key dimensions of EI have been distinguished, namely personal attitude, subjective norm, perceived behavioural control, and behavioural intention. Previous research has been mostly focusing on firm-

specific factors such as market circumstances, job design, reward structures, managers influence, and top management support in explaining entrepreneurship (Covin et al., 2020). However, entrepreneurship can emerge at any organisational level. Douglas (2020) used the utility-maximisation model of human behaviour to explain why individuals engage in entrepreneurship behaviour. The utility and disutility may take the form of income, work effort, risk, and various working conditions such as autonomy and authority (Liñán and Fayolle, 2015; Kearney and Meynhardt, 2016).

El may be affected by a variety of external and individual factors including culture (Bogatyreva et al., 2019), cognitive styles (Deprez et al., 2021), need for achievement (Ferreira et al., 2012), social context (Meoli et al., 2020), gender (Turro et al., 2020), social media (Ahmed et al., 2019), and role models (Nowiński and Haddoud, 2019). It appears that psychological factors play a major role in driving entrepreneurial intentions (Palmer et al., 2019; Wismans et al., 2021). In particular, fear of failure and well-being have been linked to entrepreneurship (Cacciotti et al., 2016; Shir et al., 2019; Wiklund et al., 2019). Another psychological factor that may influence entrepreneurship is attention-deficit hyperactivity disorder. Wismans et al. (2021) found that mental hyperactivity positively affects entrepreneurship.

# 2.4 Concept of Organisational Commitment (OC)

Generally, organisational commitment (OC) refers to a psychological link between the employee and organisation that makes it less likely that the employee will voluntarily leave the organization (Meyer and Allen, 1997). Three dimensions of OC have been distinguished, namely affective commitment, normative commitment, and continuance commitment (Meyer et al., 1993). Affective commitment represents the emotional attachment of the employees. A high degree of emotional commitment might make employees feel integrated into the organisation and identify themselves with it (Zehir et al., 2012). Normative commitment does not express any individually-felt attachment but rather reflects moral-ethical obligation towards the organization (Boatemaa et al., 2019). Continuance commitment is a result of avoiding the costs of changing the employer (Farrukh et al., 2017). Organisations may influence OC through several channels. Increasing the productiveness of interactions between employees could enhance emotional attachment of the individuals and increase commitment through the affective commitment (Zehir et al., 2012). The employer might also compensate employees for extra work through monetary and non-monetary rewards and reinforcement (Farrukh et al., 2017). Firms may also foster organisational culture that highlights the importance of organisational goals and value. This could exert normative pressure on individuals and therefore increase commitment through the normative channel (Farrukh et al., 2017).

#### 2.5 Concept of Self-efficacy (SE)

Self-efficacy (SE) is an individual's belief in their ability to accomplish a task (Bandura, 1991; McGee et al., 2009; Hsu et al., 2019). Nelson et al. (2019) defined self-efficacy as believing in one's own competencies for performing a specific task. Self-efficacy has also been linked to being a valuable asset for the development of professional and career goal accountability.

The concept of SE reflects the gap between intention and capacity to mobilise willpower. The key theoretical framework for describing SE is social cognitive theory, which views SE as a motivational mechanism (Schunk and DiBenedetto, 2020). According to the theory, SE helps translate goals into goal achievement through motivation and ability to respond to negative feedback. This can be relevant for understanding entrepreneurship as very few nascent entrepreneurs succeed in creating a business, which corresponds to the gap between intention and action (Gielnik et al., 2020). At the same time, SE may also lead to overconfidence and unattainable goals which, in turn, could negatively influence future performance (Baron et al., 2016). Furthermore, control theory predicts that high SE may result in reduced effort and complacency, suggesting that there may be a non-linear relationship between SE and goal attainment (Sun et al., 2014).

# 2.6 Relationships between CE and EI

#### 2.6.1 Theoretical Framework

The key framework used to describe the link between CE environment and EI is the Theory of Planned Behaviour (TPB) of Ajzen (1991). The TPB is a prominent model of entrepreneurial activity which has been widely used in theoretical and empirical research (Guzmán-Alfonso and Guzmán-Cuevas, 2012; Ceresia and Mendola, 2020; Deprez et al., 2021). The model is based on three key constructs, namely attitude, perceived behavioural control, and subjective norm. The intention to perform the behaviour would be greater for individuals with more favourable attitude, greater perceived behavioural control, and stronger subjective norm (Ceresia and Mendola, 2020). When it comes to attitudes, the Theory of Planned Behaviour describes them as the personal assessment, made by individuals, of particular phenomena such as entrepreneurship. If individuals view entrepreneurship as something too risky that can result in the loss of capital and income, these negative attitudes would be translated into lower entrepreneurial intentions. Conversely, if individuals view entrepreneurship as something rewarding that can improve one's well-being, satisfaction, wealth and self-realisation, these positive attitudes will stimulate stronger entrepreneurial intentions (Su et al., 2021).

In contrast to attitudes that come from within an individual and stimulate entrepreneurial intentions, social norms represent external pressure from the surroundings, including family members, friends, co-workers and the management. This construct of the Theory of Planned

Behaviour is the closest representation of the construct of corporate entrepreneurship environment studied in this thesis. If the work environment and management support stimulate innovativeness and entrepreneurial behaviour, the employees will have greater entrepreneurial intentions. Conversely, the lack of management support of initiatives in the workplace will result in lower entrepreneurial intentions (Gieure et al., 2020).

The third important factor determining intentions according to the Theory of Planned Behaviour is perceived behavioural control. This construct encompasses the individual's beliefs and confidence in their own skills, their ability to be entrepreneurs, their perceptions of constraints and opportunities and their ability to control their actions and work. When applied to entrepreneurial intentions, perceived behavioural control may be related to factors such as proactiveness of individuals, their innovativeness, and their fear of failure (Al-Mamary et al., 2020).

The translation of firm-level entrepreneurial environment described by CE into individual-level behavioural intentions and commitment can be expected to be influenced by individual-specific characteristics (Dahalla et al., 2020; Bani-Mustafa et al., 2021). The TPB can be expanded to also include the self-identify dimension (Ceresia and Mendola, 2020).

The main alternative to TPB is the Entrepreneurial Event Model (EEM), which describes entrepreneurship in terms of three constructs, namely perceived desirability, perceived feasibility, and propensity to act upon opportunity (Elnadi et al., 2020). Theoretical frameworks linking CE and EI attempt to explain why some individuals choose to work for someone else while others have an intention to become an entrepreneur (Douglas, 2020; Liñán and Fayolle, 2015; Douglas, 2020). Supply of work effort depends on how averse the individual is to work (McMullen and Shepherd, 2006). Within the utility-maximisation framework, more work implies more disutility and thus higher effort aversion (Kashmoola et al., 2017; Douglas, 2020). This links behavioural attitudes and EI with CE environment. Managers are able to adjust salaries to match the level of productivity capability of individuals and to encourage productivity improvements (Maroufkhani et al., 2018; Marques et al., 2019).

#### 2.6.2 Empirical Evidence

There seems to be little research linking CE directly to individual-level EI. Ma and Huang (2020) reported that the knowledge acquired from within the organisation helps employees identify more opportunities and increases the individuals' intention to start their own ventures. At the same time, strategic focus on pursuing such opportunities seems to weaken employees' entrepreneurial intention. Martins and Perez (2020) found that the mediating effect was positive which, while not directly describing the link between CE and EI, may still suggest that individual EO could act as a mediator in influencing the antecedents of individual EI. Related studies by Ibrahim and Mas'ud (2016) and Khodadadi et al. (2020) found a moderating effect

of EO on the relationship between entrepreneurial skills and EI. Considering the results of Ma and Huang (2020), it could be possible that individual EO may strengthen the link between CE and individual EI through the enhancement of employees' entrepreneurial skills.

The importance of drivers of individual EI may be affected by education, competence, assimilation, accommodation, and gender (Kim and Park, 2018; Elia et al., 2017; Chhabra et al., 2020; Dahalla et al., 2020; Naheed et al., 2018). This provides support for considering additional individual-level moderators of the CE-EI relationship. A large number of studies explored the link between individual EO and individual EI (Awang et al., 2016; Inoubli and Gharbi, 2022; Koe, 2016; Twum et al., 2021; Kumar et al., 2020; Park, 2017; Hassan et al., 2021; Wardana et al., 2021; Suartha and Suprapti, 2016; Shamsudeen et al., 2017; Rahim, 2018). However, this research did not explicitly consider a CE environment as it was mostly either theoretical in nature or used a student-based sample. Nevertheless, these studies reported a positive link between individual EO and individual EI which may provide a basis for the mediation effect of EO on the CE-EI relationship.

Some studies such as Díaz-García and Jiménez-Moreno (2010) found no statistically significant differences in entrepreneurial intentions between men and women even though they observed that men were more likely than women to start their own business. No gender differences in the formation of EI from its antecedents were detected in the context of European countries by Santos et al. (2016). Ahmed et al. (2019) made similar findings in the context of the UAE where they did not observe any significant differences in entrepreneurial intentions among adult male and female respondents. In contrast to Díaz-García and Jiménez-Moreno (2010) and Ahmed et al. (2019), a more recent study produced by Haus et al. (2013) evidenced the difference in entrepreneurial intentions between men and women, with men having stronger EI. However, they also argued that the results were sensitive to the geography and whether the respondents were students or employees. Thus, there was no homogeneity in their findings and additional moderators had to be considered.

Interesting findings were obtained by Nowinski et al. (2017) who found men to have more entrepreneurial intentions than women, but women tended to provide stronger positive response to entrepreneurial education, which would make them better entrepreneurs. Similar behaviour was observed in the context of the CE-EI nexus as the CE environment also provides motivational effects on EI similar to entrepreneurial education (Thornberry, 2003; Kuratko et al., 2018).

Ryu and Kim (2020) found significant effects of gender on the ability of people to recognise opportunities and their entrepreneurial intentions. This relationship was stronger and steeper for men than for women. However, some country specific differences were observed, as in

some of the analysed countries, this effect did not hold. Furthermore, opportunity recognition is only an element of corporate entrepreneurship and does not capture the whole construct.

Since previous literature distinguished several dimensions of CE, such as support of top managers, autonomy, rewards and reinforcement, and time availability (Kuratko et al., 2014; Sakhdari, 2016), it is important to discuss the individual effects of each of these dimensions on El.

#### 2.6.2.1. Management Support and El

Entrepreneurial intention is often derived from different personal and contextual factors affecting an employee. As becoming an entrepreneur is a challenging process, the fostering of entrepreneurial behaviour among employees requires strong management support. The entrepreneurial journey is often preceded by a strong intention and motivation to pursue a specific career path. Muralidharan and Pathak (2018) observed that leadership is one of the key factors behind the entrepreneurial intentions of employees. Transformational leaders with their ambitious approach, often influence the team members to develop an entrepreneurial mindset. Furthermore, Baskaran (2018) observed that management support drives innovation and positivity among employees. However, it might not help employees develop the risk-taking behaviour that is necessary for becoming entrepreneurs. It also observed that management support is beneficial for motivating employees to achieve corporate objectives and drive innovation.

Similarly, Harrison et al. (2018) identified management as the key organisational factor that influences entrepreneurial intentions among employees. To examine the impact of management on entrepreneurial intentions, Harrison et al. (2018) conducted a study on the retail pharmacy sector within Nigeria. The study applied a skill-based empirical model within a developing economy. It was observed that the interaction with the management and the environment of the organisation inculcates entrepreneurial intentions among employees. Management often helps employees learn the skills needed to find opportunities in challenging situations. It suggested that this management support is an organisation's combined effort to facilitate and promote entrepreneurial behaviour and activities among employees. This support is often provided by offering resources and a place to develop entrepreneurial skills such as leadership skills, technical skills, conceptual skills, problem-solving skills and interpersonal skills. These skills can be further applied in business establishment, business commercialisation, and business administration.

However, Felix et al. (2019) argued that leadership is not the only factor that drives entrepreneurial intentions. The study suggested that although management support seems to be an influential factor behind entrepreneurial intentions, the latter also depend on external factors such as the social system and the interdependencies between individuals and

organisations. In addition to this, the enthusiasm of management to enable and promote entrepreneurial activities within the organisation will determine the duration and quality of management support. This conclusion was based on an analysis of 34 countries, whereas the previously discussed studies focused on a single country. The results showed that different types of leadership have different effects on entrepreneurial activity. It also addressed the fact that in a competitive global market, management support and entrepreneurial intentions need to cope with huge uncertainty. As a result, future studies are needed to understand the practical implications of management support for entrepreneurial intentions.

#### 2.6.2.2. Work Autonomy and El

Work autonomy is defined as the freedom given to employees to work in their preferred way. It not only gives employees the control over their work but also allows them to decide the pace of their work and the order of task completion (Nielsen et al., 2019). Some organisations also give employees the flexibility to decide when and where they want to do their work. Nielsen et al. (2019) observed that the employees' willingness to act autonomously in a work environment is influenced by the proactive attitude, clear communication and initiative of the management. They also found evidence that a good leadership style often has a positive impact on the entrepreneurial actions of employees. The study found a positive correlation between the leader's proactive behaviour and the employees' intentions to begin their entrepreneurial journey.

While the previously discussed studies used cross-sectional observations from different countries such as Serbia (Nielsen et al., 2019) and Denmark (Rocha and Van Praag, 2020), Delanoë-Gueguen and Liñán (2019) made further contribution by running panel surveys with the same respondents in a five-year interval. Using longitudinal data and rigorous data analysis, the study found that autonomy positively influenced the formation of entrepreneurial intentions at different stages. Workplace autonomy gives employees the independence to make their own work decisions. It boosts their creativity and provides confidence to achieve bigger targets. The study also pointed out that, in a practical scenario, while autonomy is important for fostering entrepreneurial intention, when it comes to actual transformation, its impact is likely to vanish. This is because starting a business requires managing the entire process. While employees may be motivated by work autonomy, they may find it difficult to use their skills outside the organisation.

#### 2.6.2.3. Rewards and Reinforcement and El

Rewards and reinforcement can have a significant impact on the employees' entrepreneurial intentions. While reward is a type of acknowledgement for the merit, service or hard work of

employees, reinforcement is the technique used by managers to boost their performance, innovation, confidence and commitment (Choi and Presslee, 2023). While rewards are an example of a positive stimulus within a company, reinforcements can be both positive and negative. Positive reinforcement implies either financial or non-financial incentive for employees to perform a certain task that will align their interests with the interests of the company. Negative reinforcement implies the withdrawal of certain benefits to stop unproductive behaviour that is not aligned with the company's goals and interests (Perez, 2021). Rewards and reinforcement not only create a positive work environment for the employees but also help in employee retention and enhanced performance. This enhanced job performance and constant recognition empower employees with strong entrepreneurial intentions. By creating a financial and non-financial reward systems, organisations can motivate employees to be innovative and deliver better job performance. Financial rewards are high in value; these tangible rewards that can help in recognising the achievements and contributions of the employees through monetary compensation. In turn, non-financial rewards can be termed intangible rewards that do not include monetary benefits, and provide the emotional value to the employees (Choi and Presslee, 2023). These emotional values can further develop entrepreneurial intentions among employees.

Vuorio et al. (2018) argued that entrepreneurial intentions can be developed through intrinsic and extrinsic rewards. Here, extrinsic rewards can include personal gain in the form of social, economic and environmental value creation. Employees receiving extrinsic rewards from the organisation are more likely to pursue work, which can help them achieve financial gains, power, prestige and social status. On the contrary, intrinsic rewards are associated with creativity and focus on learning and problem solving. As a result, employees receiving intrinsic rewards are more likely to be motivated to find solutions to complex problems, solve challenging tasks and be innovative. These values are also associated with entrepreneurial intentions and employees receiving intrinsic rewards are more likely to become sustainable entrepreneurs.

In another study, Ruiz-Alba et al. (2019) compared employee rewards and reinforcement in an organisation to the different stages and challenges of a game. Similar to a game where players are rewarded for completing every challenge, employees can also be rewarded with financial and non-financial rewards for successfully completing challenging tasks at the workplace. the authors suggested that, similar to a gaming experience, employees who receive rewards at different business stages are motivated to take on more challenges. This boosts their confidence and leads to the development of entrepreneurial intentions among employees.

However, Shabsough et al. (2021) argued that the entrepreneurial intentions of female employees are not driven by rewards and reinforcement. They explained this by the role of sticky floor perception, which implies the phenomenon of gender inequality in the work place when women cannot move up from the lower positions to middle and high positions in the company. Their study evidenced that not all women receive rewards or positive reinforcement for their hard work, skills or efforts. Several women feel trapped in low-salary jobs at bottom to middle-level positions for a longer period of time. As a result, women develop entrepreneurial intentions due to a lack of recognition and frustration.

#### 2.6.2.4. Time Availability and El

Time availability in the workplace is another significant factor that affects the entrepreneurial intentions of employees. Despite being a crucial element, time availability is often scarce at several workplaces. Marques et al. (2018) observed that employees with additional time availability are more likely to be creative and find ways to accommodate challenging tasks in their schedule. They concluded that time availability is a crucial organisational factor that can lead to the development of entrepreneurial intentions in employees. However, Baskaran et al. (2018) argued that there was no significant impact of time availability on the entrepreneurial intentions of the employees. In their research, the surveyed employees received little to no autonomy in their work. This negatively affected the risk-taking behaviour of the employees and they were hesitant to take new chances. Additionally, employees needed approval from top management for their ideas or incorporating statistical changes in the work processes. As a result, employees felt less confident and did not develop entrepreneurial intentions despite having better time availability.

Douglas et al. (2021) attempted to synthesise the previously available findings by modelling entrepreneurial intention as a function driven by three major factors, which include innovation, profit, and social impact. However, they did not find any significant impact of time availability on the entrepreneurial intentions of employees. Moreover, the study emphasised using a single overarching model to compare the intentions of employees working in different organisations and from various demographics. Entrepreneurial intentions are nurtured in a positive work environment where employees have the availability of time and resources. Hu et al. (2022) concluded that entrepreneurial intentions are developed when employees receive good organisational support, resources and time availability. Time availability strengthens the entrepreneurial ability of employees and promotes entrepreneurial intentions. However, the study suggested that while this is the case in the human resource sector in China, there is a need for further study on HR of individuals employed in private, international and medium or large sized enterprises.

#### 2.7 Relationship between CE Environment and OC

#### 2.7.1 Theoretical Framework

More entrepreneurial employees are regarded to be more likely to leave the organisation and start their own venture (Boonsiritomachai and Sud-On, 2021). However, this effect may be offset by the employees' belief in the organisation's value and vision. The relationship between corporate entrepreneurship and organisational commitment is explained by the Social Exchange Theory (SET). The theory posits that employee's decisions to stay committed to the company are determined by the principle of reciprocity (Meira and Hancer, 2021). This means that if the company treats employees well, the latter will have an intrinsic motivation to work harder and repay the company with greater loyalty and commitment. This argument agrees with the Stewardship Theory, which also emphasises the role of intrinsic motivations to perform the job diligently, whereas the alternative Agency Theory suggests that external control mechanisms or incentives are needed to keep employees working in the interests of the company (Löhde et al., 2021).

The Social Exchange Theory also describes the organisational commitment of employees as a result of weighing their costs and benefits. If the employees believe they will gain more benefits than costs by staying loyal to the organisation, they will exhibit greater commitment (Zhang and Liu, 2022). The benefits, according to SET, are not limited to monetary rewards, salary and bonuses, but include managerial support, work-life balance and time availability provided by the company, the level of discretion in the workplace and autonomy enjoyed by employees at their job (Hasan et al., 2021). Thus, based on the Social Exchange Theory, it can be hypothesised that corporate entrepreneurship environment nurtured by the company should produce positive effects on the organisational commitment. Employees of the organisation will feel obliged to their supervisors, colleagues, or the organisation in general as long as they have benefited from exchanges with the organisation (Farrukh et al., 2017; Boatemaa et al., 2019). As such, organisations should be willing to implant workplace processes that support employees and therefore foster organisational commitment (Zehir et al., 2012).

Employees that are characterised by a high level of OC can be expected to work harder than those who have lower levels of OC (Farrukh et al., 2017). CE could lead to a more productive and positive interaction between employees which enhances emotional attachment of the individuals and therefore contributes to affective commitment (Zehir et al., 2012). CE also may directly compensate employees for entrepreneurial activities through rewards, reinforcement, autonomy benefits, and managerial support (Farrukh et al., 2017; Boatemaa et al., 2019).

#### 2.7.2 Empirical Evidence

The literature on the link between the CE environment and individual-level OC is scarce. Boonsiritomachai and Sud-On (2021) found that work engagement may affect OC. At the same time, not all studies assumed a unidirectional impact of the CE environment on OC but argued that OC could also influence CE constructs. For example, Boatemaa et al. (2019) reported that OC was one of the determinants of CE, which suggests that there may be potential endogeneity issues in the association between CE and OC.

Several studies in the past also suggested that the effects of the CE environment on OC could be sensitive to demographic factors, such as age, gender, education and marital status of the employees (Visanh and Xu, 2018; Van Rossenberg et al., 2018; Chan and Ao, 2019). These studies observed that the social and psychological differences between men and women can have a strong impact on their organisational commitment. Visanh and Xu (2018) concluded that female employees are more likely to stay committed to the organisation as compared to male employees. However, Van Rossenberg et al. (2018) and Chan and Ao (2019) argued that individual factors of CE environment such as organisational support and autonomy have a significant influence on the organisational commitment of both male and female employees alike.

In research conducted by Thompson et al. (2020) it was observed that the gender of an employee is one of the significant contributing factors to organisational commitment. The study stated that in an organisation, women feel more obliged to work for a longer time as compared to male employees. Even in organisations where women do not receive adequate support, they feel obliged to stay committed to the organisation. This is in contrast to male employees, who do not feel obliged to continue working in an unsupportive organisation. Thus, demographic factors such as gender can change the strength of the effect of the CE environment on OC.

The study conducted by Thompson et al. (2020) highlighted the bias women face while working in different industries. This agrees with Ruiz-Palomo et al. (2020) who conducted a study of 256 hotel employees working in Madrid and showed that very few are able to make it to managerial positions. This is because female workers often accept jobs with lower salaries and are willing to work longer hours. Due to gender discrimination at the workplace, women find it difficult to reach positions that are traditionally held by male employees and might not feel committed to the organisation. Ruiz-Palomo et al. (2020) also suggested that organisations that implement enrichment strategies for women and do not discriminate between male and female employees are more likely to witness an increase in commitment from female employees.

As job enrichment can have a positive influence on the organisational commitment of women, Grobelna (2019) also stated that organisations should build to improve the working conditions and experience of female employees. On the contrary, Ashraf (2020) argued that there is no significant link between the gender of the employees and organisational commitment. The study suggested that other factors of CE environment such as compensation structure, resources, development opportunities, organisational support and personal circumstances influence the decision of both male and female employees to stay with the organisation or quit their job. Additionally, employee satisfaction, rewards, recognition and autonomy are also crucial in positively affecting the organisational commitment of both genders (Dalkrani and Dimitriadis, 2018).

Similar to the review of studies on the effects of CE on EI, it is important to discuss the contribution of individual dimensions of CE such as support of top managers, autonomy, rewards and reinforcement, and time availability on OC.

# 2.7.2.1. Empirical Evidence on Management Support and Organisational Commitment

Organisational commitment (OC) is defined as the employees' state of staying faithful to the organisation. It ensures that employees assist the organisation in achieving combined goals while maintaining their own identity, involvement and loyalty (Singh and Onahring, 2019). Moreover, organisational commitment can also be suggested as a state where employees identify that their values, goals and vision align with a specific organisation, and they wish to remain associated with the organisation. Singh and Onahring (2019) observed that factors such as management support, salary, work-life balance and career opportunities play an important role in job satisfaction. They also stated that employees who are satisfied with their job are more likely to remain committed to the organisation for a longer time.

Khalid (2020) has evidenced that employee commitment is positively facilitated by pay satisfaction and managerial support. However, they also observed that pay satisfaction was indirectly associated with effective employee commitment and was stronger among employees with higher managerial support. This means only the employees who received management support were eligible for a higher salary structure. Moreover, this also resulted in them being more committed to the organisation. Similarly, Ahmad et al. (2020) found a significant and positive relationship between management support and employee commitment. It was observed that management can extend support to their employees by paying more attention to their needs, offering a competitive salary and providing resources for growth and development. This evidence also agrees with Zhenjing et al. (2022) who observed that supportive management had the power to boost employee commitment. As managerial

support is likely to create a positive work environment, it can have a positive impact on improving the commitment level of employees and their ability to work effectively.

Zhenjing et al. (2022) noticed that employees do not show commitment in a restrictive environment where they receive little to no managerial support. However, the study highlighted that the style of working of the employees often changes based on the workplace environment. While some employees are more committed regardless of the workplace conditions, others prefer a supportive environment to stay committed.

#### 2.7.2.2. Work Autonomy and OC

Work autonomy is argued to provide employees with the freedom to create processes and determine work schedules and methods at their own discretion (Lee et al., 2021). Lee et al. (2021) observed that positive feedback from managers often helps employees achieve organisational goals and stay committed to the organisation. It motivates those employees and improves their efficiency in performing different tasks. The study found a correlation between positive feedback and work autonomy. Work autonomy facilitates creativity and proactive behaviour among employees. In return, employees feel more committed to work and stay loyal to the organisation. On the other hand, Jung et al. (2020) linked work autonomy with empowerment. Jung et al. (2020) stated that workplace empowerment boosts motivation and self-efficacy in employees. It eliminates employee helplessness and motivates them to have autonomy and achieve their own goals. Moreover, it makes employees more competent and self-determined. This, in turn, keeps them committed to the organisation. When leaders demonstrate empowering leadership, they nurture work autonomy by encouraging employees to participate in organisational processes. Moreover, empowered leaders also delegate authority and autonomy to their employees and regularly engage them in decision-making processes. This has a positive impact on the employees' commitment to the organisation (Jung et al., 2020). However, the study also noted that employee's commitment can be influenced by various other behavioural factors, such as their relationship with the manager, job satisfaction and career goals.

In line with the above-mentioned articles, Miedaner et al. (2018) argued that the degree of autonomy has a larger impact on the employees' organisational commitment. As a result, the study investigated the different levels of autonomy and analysed how they affect the employee's organisational commitment. The researchers defined different stages of autonomy as autonomy in decision-making, autonomy in work methods and autonomy in work scheduling. It was observed that individuals with more years of professional experience reported higher autonomy and organisational commitment as compared to employees with less experience. It was also observed that decision-making autonomy was positively

associated with employees' organisational commitment. However, Miedaner et al. (2018) did not find any significant impact of autonomy in work methods and work schedule on the organisational commitment of the employees. Furthermore, the study stated that regardless of work autonomy, physicians and nurses working in larger hospitals demonstrated lower organisational commitment. Also, employees demonstrated higher organisational commitment in hospitals that valued their staff and provided resources for growth.

#### 2.7.2.3. Rewards and Reinforcement and OC

Neessen et al. (2019) argued that to get the maximum impact, rewards should align with the goals of the employees and must be based on the result of their performance. The study further explained that rewards boost the willingness of employees to participate in different innovative projects. They ensure job satisfaction among employees and motivates them to stay loyal to the organisation. Based on a critical review of the existing literature, Neessen et al. (2019) also noted that rewards and reinforcement drive intrapreneurship among employees. As the efforts of the employees are recognised, they become more innovative, proactive, and willing to take risks to create new processes, products, and services.

Furthermore, Ahmed et al. (2020) compared rewards and reinforcement with the resources needed to encourage the employees. They found a positive relationship between rewards and reinforcement and employees' commitment to the organisation in which they worked. They also stated that rewards and reinforcement boost the employees' motivation to work with full energy. Employees become more enthusiastic about their work, which results in better innovation, and enhanced commitment. Moreover, rewards and reinforcement also foster synergy in the workplace and employees feel obliged to respond to business needs. They demonstrate better engagement and are likely to feel responsible for repaying the organisation with commitment. This in turn improves the business performance and motivates the employees to stay with the organisation for a longer time.

Gulyani and Sharma (2018) examined the influence of monetary and non-monetary rewards on the commitment of 201 employees working in various Indian organisations. They demonstrated that monetary rewards had a significant impact on the happiness and commitment of employees. Employees receiving monetary rewards demonstrated increased work happiness, engagement and commitment. Similarly, positive reinforcement, such as strategies to strengthen feelings of appreciation, learning and growth opportunities, and continuous feedback from the leaders, also had a positive impact on employees' work happiness and commitment to the organisation. The study stressed that new organisations often find it challenging to offer monetary or non-monetary rewards. However, creating strong

rewards and reinforcement strategies can help new organisations retain their employees and improve their work engagement.

On the other hand, Koo et al. (2020) categorised rewards as emotional rewards and material rewards. Here, emotional rewards include compliments, opportunities, recognition, and empowerment, whereas material rewards include incentives, promotions, certificates, and special leaves. Koo et al. (2020) revealed that both emotional and material rewards are key dimensions in the formation of employees' commitment. As a result, a proper reward system must be created in a workplace to attract and retain qualified employees.

#### 2.7.2.4. Time Availability and OC

Employees spend a significant amount of time at work. While most of the time spent into a workplace goes into productive activities, some amount of time is spent by workers being idle (Zhenjing et al., 2022). Employees who are satisfied with their work environment are more likely to utilise both productive and idle time more effectively. Zhenjing et al. (2022) examined the impact of workplace environment, time availability and resources availability on employees. The study found that in a positive work environment, employees have the flexibility to create their own schedule. It concluded that a positive work environment and time availability had the power to boost employees' commitment levels and performance.

Rodríguez-Sánchez et al. (2020) also noted that the new generation of employees is more interested in jobs that respect their time availability. These organisations value the spare time of employees and offer them facilities to practice sports, learn new skills, improve their knowledge and increase social welfare. These practices not only boost the confidence of the employees but also help in reducing stress, burnout, and conflict. As a result, employees with time availability feel more committed to their organisation. Rodríguez-Sánchez et al. (2020) also compared time availability to non-monetary benefits that should be part of organisational policies to retain talented employees.

On the other hand, Simon et al. (2023) conducted research on employees working from home to understand the impact of time availability on organisational commitment. The study found that, as compared to employees who spent more time working in offices, employees who work from home have a narrow social sphere. This is likely to have a negative impact on their networking, communication, and collaboration skills. Moreover, employees working from home may not be able to take advantage of available time to improve their productivity or effectively utilise the resources offered by the organisation. The study also noted that employees working from home have better control over their schedules. They are more likely to have better work-life balance and reduced stress. These factors can contribute to work satisfaction and employees working from home may be more committed to the organisation.

In support of this evidence, Nwekpa et al. (2020) also found a positive relationship between flexible working hours on commitment of employees. It also found a significant impact of a compressed work week and job sharing on continuous commitment among employees. The study concluded that to retain employees, organisations should offer schedule flexibility to their employees and adapt policies such as a compressed work week and job sharing.

#### 2.8 Relationship between CE and SE

#### 2.8.1 Theoretical Framework

The two key theories that may provide a link between CE environment and SE are social cognitive theory and control theory. Social cognitive theory posits that SE is a motivational mechanism that helps overcome the intention-to-action gap (Hsu et al., 2019). According to this theory, people learn by observing the actions of others in their work environment. Thus, a supporting environment at the workplace and corporate entrepreneurship practiced in the organisation naturally create more role models for employees. Their successes can stimulate other employees in pursuing their goals and this would build self-efficacy. Furthermore, observing own success in new product development, project launch or innovation will enhance self-efficacy of employees working in the corporate entrepreneurship environment.

Based on this view, CE environment that promotes entrepreneurship may be especially impactful for employees with high SE since they would be more likely to translate goals into goal attainment (Gielnik et al., 2020). At the same time, control theory assumes that SE serves as more of a self-regulatory mechanism (Sun et al., 2014). In this context, high SE could be detrimental to performance due to potential complacency and inadequate effort, which suggests that there may be a non-linear relationship between SE and goal attainment in a favourable CE environment.

#### 2.8.2 Empirical Evidence on the Relationship between CE and SE

There appears to be little research explicitly linking CE and SE. The findings of Rabl et al. (2022) on digital technologies suggest that SE and CE play a similar moderating role in translating digital technology support and intrapreneurial behaviour. Padi et al. (2022) found that SE mediates the effect of CE on employees' competencies. SE of nascent entrepreneurs has been linked to business creation (Rauch and Frese, 2007), providing support for the view that SE acts as a mechanism for self-generating motivation. Gielnik et al. (2020) reported a U-shaped relationship between entrepreneurship and self-efficacy.

Bordalo et al. (2019) noted that the differences between the abilities of men and women at workplace are often deep-rooted in the society and are based on self-stereotyping. These

opinions are also reflected in the occupational self-efficacy and career aspirations of individuals at a workplace.

Coffman et al. (2019) noted that occupational self-efficacy can have a significant impact on the career decisions and goals of male and female employees. Similarly, Casile et al. (2021) noted that while women outperform men in problem solving and computation, they demonstrate low confidence in their abilities in certain competitive tasks linked to financial handling, manipulation, and forecasting.

Irrespective of the gender, confident individuals are more likely to overcome workplace obstacles and engage in behaviours that boost their career success (Barth et al., 2018; Mihalcová et al., 2018). To improve occupational self-efficacy, both men and women need to believe in their capabilities, be proactive and have high career aspirations.

Furthermore, Chowdhury et al. (2019) argued that there is no significant impact of supportive leadership on the level of self-efficacy of employees. Self-efficacy also depends on the cultural backgrounds and beliefs of the individuals. For example, in more individualistic cultures such as the UK and the US, higher self-efficacy may be manifested in the individual employee success in competing their projects whereas in collectivist countries in Asia, self-efficacy may mean a group success and achievement.

Similar to the review of the determinants of EI, the individual effects of the main dimensions of CE on SE are discussed in the following sub-sections.

#### 2.8.2.1. Management Support and SE

Self-efficacy is an important individual resource that refers to a person's belief in his or her capability to perform different tasks in various situations (Hidayah et al., 2019). In a workplace, self-efficacy allows employees to determine the amount of effort they spend in overcoming challenging situations and how long they continue to deal with the workplace obstacles. Hidayah et al. (2019) identified that managerial support nurtures self-efficacy beliefs among employees. Self-efficacious employees are more likely to handle their tasks effectively and be passionate towards their work. The study also suggested that to show their support, managers must share positive feedback with their employees and motivate them to make meaningful contributions to the organisation. Furthermore, Na-Nan and Sanamthong (2020) claimed that leadership plays a crucial role in influencing the beliefs and perceptions of employees to efficiently execute their tasks. They identified that continuous management support often motivates the employees. Continuous feedback from the management also enables the transfer of knowledge, skills and abilities among employees. This in turn increases the self-efficacy of employees and motivates them to work more passionately.

Afzal et al. (2019) associated the link between management support and self-efficacy with the 'goal setting theory'. As per this theory, in an organisation, supervisors assign challenging goals to only specific employees (Latham and Locke, 2018). This demonstrates the confidence of supervisors in the employees, and also the support the supervisor is willing to offer to the employee. In return employees then set higher goals and try to improve their efficiency. Afzal et al. (2019) also claimed that when the self-efficacy of employees is improved due to supervisor support, it results in increased confidence among employees. The study concluded that management support not only has a positive impact on the self-efficacy of employees but is also creates an environment where employees constantly strive to achieve their goals. In line with this view, Vieira et al. (2018) found that self-efficacious employees had a positive impact on their organisation's customers. However, this self-efficacious behaviour in employees came from the support they received from their managers. These managers nurture a supportive environment and motivate the employees to choose the best professional paths.

#### 2.8.2.2. Work Autonomy and SE

Ghani et al. (2019) noted that employees with higher level of self-efficacy are more determined and motivated to produce better results at work, demonstrating higher level of work engagement. Whereas, employees with lowers level of self-efficacy are more likely to give up in challenging situations and find it difficult to complete their tasks.

Self-efficacy can be termed as an important individual characteristic that is influencing different workplace attributes such as autonomy and discretion (Bargsted et al., 2019). Bargsted et al. (2019) found a link between job autonomy and job enrichment, with the latter being the opposite to job enlargement. Whereas job enlargement implies loading employees with more tasks to increase the output and productivity, job enrichment implies targeting employee satisfaction with expanding the variety of tasks that will be meaningful and interesting for the employees to complete (Bargsted et al., 2019). They also linked the positive work conditions with positive attitudes of the employees. The study concluded that work autonomy has a positive impact on self-efficacy of employees. However, management must enrich autonomy among its employees through regular interventions in the form of feedback, support and recognition.

In another study, Dedahanov et al. (2019) attempted to identify the relationship between work autonomy and self-efficacy by analysing the responses of highly skilled employees working in the Republic of Korea. They measured job autonomy based on the freedom the employees received to decide how they perform the assigned tasks and the freedom to create their own schedule for completing the assigned tasks. The study observed that job autonomy enhances

self-efficacy among employees in an organisation. It recommended that management should give employees the freedom to decide how to perform their tasks. In addition to this, to improve job autonomy and self-efficacy, supervisors should design a training programme that allows employees to master new skills needed to complete their tasks. The study also emphasised the significance of creating self-managed teams that gives employees the freedom to make their own decisions. In line with the above evidence, Çetin and Aşkun (2018) identified a positive relationship between job autonomy and self-efficacy of employees. Additionally, the study claimed that enabling autonomous work environment enhances the overall employee experience. It also associated job autonomy with motivation factors that push employees to achieve individual and organisational goals. The study further stated that combining job autonomy with managerial feedback can add value to the employees' work and boost their confidence to take higher responsibilities and strive to obtain better results.

#### 2.8.2.3. Rewards and Reinforcement and SE

The contracts of employees often include a combination of base salary and incentives. While base salary is determined by the previous performance of the individual, incentives are rewards that are paid after an employee achieves the pre-established level of performance (Park and Yang, 2019). Incentives can also be defined as rewards given for successfully accomplishing tasks in an organisation. Park and Yang (2019) showed that the competency of employees increased when they were offered rewards in the form of incentives upon completion of specific tasks. They also observed that employees who could not receive incentives exhibited disappointment for performing poorly and had lower self-efficacy. They linked lower self-efficacy to lower employee performance, which could result in a vicious downward cycle in employee performance. This evidence agrees with Na-Nan et al. (2021) who conducted a study on the direct and indirect influence of rewards and reinforcement on the self-efficacy of employees. Using the organisational citizenship theory (Konovsky and Pugh, 1994) as the foundation of their research, Na-Nan et al. (2021) argue that employees voluntarily take on additional activities to improve their work effectiveness without the expectation of receiving any rewards for their work. The researchers observed that the rewards and reinforcement programme in a workplace act as a motivation factor that helps in achieving employee engagement, job satisfaction, and organisational commitment. Although their study did not find any significant influence of organisational citizenship behaviour on employees, it observed a strong positive impact of rewards and reinforcement on the selfefficacy of employees.

Singh et al. (2019) noted that, due to growing globalisation and competition, modern workplaces have become more dynamic and diverse in their functions. As a result, workplaces are giving significant importance to the self-efficacy and workplace well-being of their

employees. Singh et al. (2019) found a positive relationship between rewards and self-efficacy among employees. Their results suggested that in every organisation, managers should practice continuous recognition and reward employees for their accomplishments. Similarly, Nguyen and Malik (2020) revealed that extrinsic rewards such as incentives and bonuses encourage employees in private companies to share knowledge, whereas intrinsic rewards such as appreciation and recognition motivate employees working in public companies to work more effectively.

## 2.8.2.4. Time Availability and SE

Time pressure is a psychological stress experienced by employees in the workplace. Time pressure occurs when employees are expected to complete a specific task assigned by management within a limited time frame. Time pressure can be avoided by giving employees the flexibility to schedule their tasks and creating workplace policies for time availability. Li et al. (2022) observed a negative impact of time pressure on the self-efficacy of employees. They suggested that both excessive time pressure and excessive time availability can lead to lower employee performance. Thus, to create a balance and improve the efficiency of employees, workplaces must adapt to proper time scheduling. This can improve the self-efficacy of employees and help them deal with complex and urgent tasks more effectively.

Yener et al. (2021) noted that a large number of organisations use technology as a moderator for time management at the workplace. Several workplaces consider that using technology can reduce the effort levels of employees and further lead to a decrease in burnout. This can help employees manage their time better and improve their self-efficacy. The results provided by the study conducted by Yener et al. (2021) revealed that, regardless of having multiple benefits, technology can be a potential source of stress in the workplace. Employees who are not good at using technology might require more time to complete their tasks. The study also noted that employees with higher technological skills find it easier to arrange their daily tasks, set priorities and meet deadlines. This helps them manage their time in an efficient way and improves self-efficacy among employees.

Furthermore, Marsh et al. (2022) observed that organisations provide employees with different technologies to fulfil their tasks and meet their goals. These technologies can have a negative effect on the time availability and self-efficacy of employees. The study identified that, receiving emails from managers or supervisors during non-work hours can lead to work-related stress, burnout, anxiety, distraction, and interruption. It also stated that to avoid work exhaustion, organisations must create policies to avoid work-related communication in non-work hours, and make some time available for employees. This can help increase the efficiency of workers and keep them motivated.

Similarly, Rodríguez-Sánchez et al. (2020) suggested time availability as one of the most valuable aspects of an organisation. Time availability can help managers with flexible scheduling. This can give employees an opportunity to decide their schedule along with their work priorities. Rodríguez-Sánchez et al. (2020) also stated that time availability not only helps employees in improving their time management but also makes it easier for them to deal with their work and personal commitments. This indirectly increases the self-efficacy of employees and they are able to utilise their time available at the workplace more for continuous learning.

# 2.9. Chapter Summary

This chapter provided the conceptualisation of the key problems explored in this study including the meaning of the main constructs investigated in this research that include corporate entrepreneurship, entrepreneurial intentions, organisational commitment and self-efficacy. The relationships between these constructs have been discussed using both theories and previous empirical evidence from the global context. The main theories explaining the relationships are the Theory of Planned Behaviour, which explains the CE-EI associations, the Social Exchange Theory, which explains the CE-OC relationships, and the Social Cognitive Theory and Control Theory, explaining the CE-SE associations. While the empirical studies show evidence of significant and insignificant links between the explored constructs, they tend to agree on the direction of causation and the sign of the effect. In particular, the literature review has shown that corporate entrepreneurship tends to produce a positive effect on entrepreneurial intentions, organisational commitment and self-efficacy of employees. In addition to this, the chapter discussed potential control factors such as gender. The findings allow for building the initial conceptual model, which is further enhanced and elaborated on in the next chapter dedicated to hypotheses formulation.

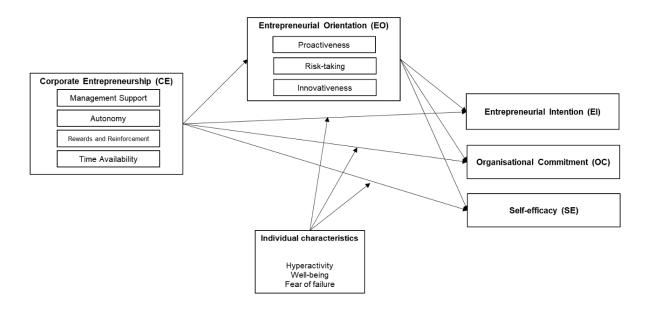
# Chapter 3: Conceptual Framework and Hypotheses Development

This chapter elaborates further on the empirical literature reviewed in Chapter 2 focusing on hypotheses development and building a conceptual framework of the study. Chapter 2 revealed what is already known on the relationships between CE, EI, OC and SE constructs, namely that CE is expected to have a positive effect on EI, OC and SE. This chapter presents hypotheses that would shed light on novel relationships between the variables such as how EO mediates the relationships and how well-being, hyperactivity and fear of failure moderate the relationships.

## 3.1. Conceptual Model

The analytical model of this study is presented in Figure 3.

Figure 3. Analytical model



The model reflects the use and extension of the Theory of Planned Behaviour as the key theoretical framework (Deprez et al., 2021) as it links the four dimensions of corporate entrepreneurship environment with entrepreneurial intention and additional constructs of OC and SE. The theory suggests that the intention to carry out a certain behaviour is greater if the individual has stronger perceived behavioural control, more favourable attitude towards the behaviour, and stronger subjective norm (Ceresia and Mendola, 2020).

I posit that (i) CE environment influences EI, SE and OC both directly and indirectly through EO as a mediator, and, in addition, that (ii) individual characteristics (hyperactivity, well-being, and fear of failure) moderate the direct CE-EI, CE-OC, and CE-SE relationships.

The core structure of the model is rooted in the direct effects of the CE environment on individual characteristics related to entrepreneurship, namely EI, OC, and SE. The CE-EI link is rooted in the theory of planned behaviour (Ajzen, 1991; Deprez et al., 2021). The CE environment may therefore affect individuals' EI by influencing their attitudes, perceived norms, and behavioural control. All four components of the CE environment (management support, autonomy, rewards and reinforcement, and time availability) are capable of exerting this influence. For example, an environment where an individual is supported by the management may affect entrepreneurship attitudes and perceived norms positively. This constitutes the basis for the direct link between CE and EI.

The modelled direct effect of the CE environment on OC is based on the Social Exchange Theory. The theory implies that, if individuals have benefited from exchanges with the organisation, such as the provision of managerial support, bonuses, and promotions, they would feel obliged to it (Farrukh et al., 2017; Boatemaa et al., 2019). Furthermore, positive interactions between colleagues would strengthen the emotional attachment (Zehir et al., 2012). In particular, this suggests the CE environment could increase the affective commitment of employees by providing managerial support, autonomy benefits, and rewards for engaging in entrepreneurial activities.

The direct effect of the CE environment on SE is rooted in the social cognitive theory and the control theory. The latter posits that SE plays a self-regulatory role (Sun et al., 2014). The former suggests that SE is a motivational mechanism that allows individuals to overcome the gap between intention and action (Hsu et al., 2019). Supportive CE environment may therefore improve SE by fostering an environment where individuals are encouraged to carry out entrepreneurial behaviours. However, the CE-SE relationship could be non-linear, as managers might only want to increase employees' SE to a point where it helps translate goals into goal attainment without complacency.

The direct effects are well documented in previous literature and backed by theories covered above. Therefore, they can be combined in the following hypothesis for the baseline model:

H0: CE environment produces statistically significant positive direct effects on (a) EI, (b) OC, and (c) SE.

# 3.2. Mediating Role of Entrepreneurial Orientation

In addition to the direct effects of CE on EI, OC, and SE, the model considers indirect linkages through possible mediating effects of EO. In general, the relationship between CE and individual EO is rooted in the theory of extra-role behaviour, also referred to as the organisational citizenship behaviour, which argues that organisational environment and intrinsic traits of employees prompt them to engage in activities that are beyond their traditional roles in the workplace (Khaola and Rambe, 2021). These activities are often associated with the personal initiative of the employee to help the organisation or its stakeholders without being asked to do so (Konovsky and Pugh, 1994; Covin et al., 2020). Individual EO can either help achieve organisational goals or reduce organisational performance. The latter effect is possible because through excessive risk-taking and innovativeness, which are constituents of EO, employees can expose the company to budget overruns, excessive costs, unauthorised behaviour and actions that the company would not regularly make under normal circumstances. When initiated autonomously, individual EO represents extra-role behaviour with uncertain outcomes. The degree to which individuals are willing to engage in unsanctioned EO, which was not previously agreed with or approved by the management, may be influenced by CE. In turn, individual EO would exert influence on EI, OC, and SE, since risk-taking, innovativeness, and proactiveness naturally affect both perceived SE and intention to engage in entrepreneurial behaviour. Positive feedback effects could also impact individuals' emotional attachment to the organisation, leading to indirect impact for affective commitment.

The links between CE and EO are investigated through the lens of the theories of citizenship behaviour and extra-role behaviour (Konovsky and Pugh, 1994; Organ, 1988) extended by Covin et al. (2020) for the case of individual EO. In general, individual EO can be a result of entrepreneurial activities that are either commissioned by the organisation or are spontaneously chosen by the individual. Individual EO could be a positive force and agree with the current operations of the organisation, yet it may also be the case that deviations from standard procedures and operations would reduce performance (Covin et al., 2020). Unsanctioned individual EO corresponds to extra-role behaviour as it is autonomously initiated and, while aimed at improving task performance, is inherently uncertain. Covin et al. (2020) emphasised that treating extra-role behaviours as organisational citizenship behaviours is not entirely appropriate. Individual EO is linked to innovation and therefore is uncertain in general (Badoiu et al., 2020). It is possible for proactive behaviours of individual employees to be antagonistic to the firm's established routines and procedures.

There appear to be several studies that explicitly investigate the link between the CE environment and individual-level EO. Jong et al. (2015) reported that job autonomy fosters entrepreneurial behaviour and EO through proactivity and innovation channels. At the same time, job variety was found to have no effect on EO. The importance of studying EO as a complex construct was also noted by Neessen et al. (2019) and Wales et al. (2020). In a related study, Palmer et al. (2019) found that paths explaining firm performance consist of combinations of firm-level and individual-level variables including individual EO dimensions. Chang et al. (2019) reported that EO of individual employees is positively related to the CE environment, which provides support for the view that the CE environment influences EO at multiple organisational levels. Bolton and Lane (2012) designed a measurement instrument for individual EO based on three key dimensions of EO, namely risk-taking, proactiveness, and innovativeness. Covin et al. (2020) found that proactiveness and innovativeness act as substitutes. Fellnhofer (2018) further elaborated that these constructs comprising EO could be measured at both the individual level and firm level, and they were related. Further, Kollmann et al. (2017) found that the diversity in individual EO, namely the level of risk-taking among employees, was significantly and positive related to the relationship conflicts within the organisation. As such, it can be deduced that this could have negative implications for organisational commitment and at the same time stimulate entrepreneurial intentions of employees.

### 3.2.1. Indirect Effects of CE on EI through EO

With regards to the link between CE and EI and its potential mediation by EO, relevant studies have considered the relationship between EI and perceived corporate environment. One potential channel of EO through which CE environment may shape EI is knowledge and learning. For example, the study by Ma and Huang (2020) examined the EI of employees from Chinese global sourcing suppliers. The findings showed that the knowledge acquired by employees during the course of their work helps them identify more opportunities, in turn increasing their EI. These results indicate that it is possible for CE to indirectly affect EI by fostering a knowledge-sharing environment which would boost EO.

In another study, Ibrahim and Mas'ud (2016) considered how entrepreneurial skills are related to EI. The study showed that the link between entrepreneurial skills and EI is moderated by EO, while the link between environmental factors and EI is not affected by EO. Similar findings on the relationship between entrepreneurial skills, EI, and EO were reported by Khodadadi et al. (2020). This further suggests that CE focused on knowledge and learning may be more readily translated into EI through a boost in innovativeness, risk-taking, and pro-activeness due to acquired knowledge.

The study by Martins and Perez (2020) found that the positive perception of entrepreneurship affects EI, and this relationship is mediated by individual EO. While the study was based on data collected from undergraduate students, it nevertheless provides insight on the psychological drivers of EI which may be relevant in describing the effect of CE. Specifically, CE may help reduce stigma of entrepreneurial failure and create a positive valuation of entrepreneurship, which would strengthen the effect of EO on EI. While the majority of studies linking individual EO and individual EI seem to be relying on data collected from students (Awang et al., 2016; Twum et al., 2021), they nevertheless provide evidence on the behavioural pathways of how EO may affect EI. For instance, Awang et al. (2016) showed that EI is significantly influenced by individual EO, perceived behavioural control, and subjective norm in the context of Malaysia. This indicates that an antecedent of EI may influence it by changing perceptions of entrepreneurship, which would in turn affect individual EO and how it translates into EI.

A related study of Malaysian students by Koe (2016) revealed that the most relevant EO dimensions influencing EI are pro-activeness and innovativeness, while risk-taking was not impactful. Overall, similar findings linking EO to EI were reported for Ghana (Twum et al., 2021), Tunis (Inoubli and Gharbi, 2022), India (Kumar et al., 2020; Hassan et al., 2021), South Korea (Kumar et al., 2020), Indonesia (Wardana et al., 2021), and Nigeria (Shamsudeen et al., 2017), among others. In particular, Hassan et al. (2021) found that entrepreneurial education facilitates individual EO while also having a positive impact on EI. This is consistent with studies on how EI may be affected through knowledge and learning channels (Ma and Huang, 2020; Ibrahim and Mas'ud, 2016). Furthermore, the results highlight the potential role of CE in fostering a learning environment which could shape individual EO and more likely translate into higher EI.

Based on the review of these studies, the following hypothesis is proposed:

H1: Entrepreneurial orientation mediates the positive effect of corporate entrepreneurship environment on the entrepreneurial intentions of employees in Abu Dhabi.

## 3.2.2. Indirect Effects of CE on OC through EO

Few studies have explicitly considered the link between CE environment, individual EO, and OC. Therefore, in order to deduce the potential mediating role of EO in channelling the effects from the CE environment on OC, it is important to review the studies that previously established the links between CE and EO and between EO and OC. The availability of such links would suggest that CE environment and OC could also be associated through the channel of EO.

Boonsiritomachai and Sud-On (2021) found that work engagement is positively influenced by entrepreneurial orientation. Being the opposite to work burnout, greater engagement of employees stimulated by EO also results in greater organisational commitment (OC) of these employees. Thus, there is a positive link established between EO and OC.

Previous studies, such as Ram et al. (2017), found that certain dimensions of the CE environment, such as time availability and autonomy at work, produced a significant positive effect on EO, which is traditionally measured by factors such as risk-taking, innovativeness and proactiveness. However, there are also studies such as Baskaran et al. (2018), who tested similar relationships in a different context and found no support for the hypothesis that these association between the CE environment and EO would hold. The discrepancies in the results of the past studies may be explained by the sensitivity of the results to a particular setting, such as industry or country, and the choice of different control variables used that could interfere with the main effects. For example, Ram et al. (2017) investigated a single case study of Shin-Etsu Malaysia and used control variables such as work discretion and learning orientation, whereas Baskaran et al. (2018) focused on the cement production industry in the state of Johor, Malaysia and used control variables such as resources and time availability in addition to the key constructs of EO. As such, while the link between the CE environment and EO and between EO and OC was established and tested before, albeit with mixed results, it hints at the possibility of the existence of mediating effects from the CE environment to OC that could be channelled through EO, and this relationship should be tested in a new context such as Abu Dhabi.

It is also valid to note that the idea of treating EO as a mediator is not completely new and is supported by another stream of academic literature. The importance of EO as a mediator is that it characterises specific entrepreneurial traits reflected in employees exposed to CE. Entrepreneurial orientation constructs such as risk-taking, innovativeness, and proactiveness were previously treated as mediating variables in different contexts. For example, Tipu and Fantazy (2023) found that EO significantly mediated the relationship between human capital in organisations and the performance of the whole supply chain. However, not all constituents of EO channelled the effects equally. Risk-taking produced a negative mediating effect whereas innovativeness and proactiveness evidenced positive mediation. Other researchers such as Sanjaghi et al. (2014) found significant effects produced by EO on organisational commitment but not all components of EO were statistically significant. In particular, among risk-taking, innovativeness and proactiveness, only innovativeness was significantly and positively related to organisational commitment. Combining the effects of EO on OC with our

earlier discussion of the effects of CE on EO results in modelling the latter as a mediator. That is, the review of these studies allows for formulating the next hypothesis:

H2: Entrepreneurial orientation mediates the positive effect of corporate entrepreneurship environment on the organisational commitment of employees in Abu Dhabi.

## 3.2.3. Indirect Effects of CE on SE through EO

Little research appears to exist that would link the CE-SE relationship to individual EO, with studies tending to consider EO and SE in the context of their impact on performance (Imran et al., 2019; Alarjani et al., 2020; Al-Kwifi et al., 2023). One relevant direction of research is exploring the indirect effects of institutional environment on SE. In particular, the study of Alarjani et al. (2020) examined how institutional environment may influence the relationship between EO and SE. The study used data from SME owners in Saudi Arabia to investigate potential impacts of institutional climate on the success of entrepreneurship-based SMEs. It was found that institutional environment moderates the EO-SE relationship. Specifically, the findings suggested that a positive perception of institutional environment strengthens the link between EO and SE. Similar findings were reported by Imran et al. (2019) who found that EO and SE positively affect firm performance. However, it should be noted that both Alarjani et al. (2020) and Imran et al. (2019) only considered the EO-SE link insofar as it helped explain how EO affects SME development, while the present study focuses on SE and how it is affected by CE.

The lack of literature on the indirect effects of the CE environment on SE channelled through EO can be explained by the fact that previous researchers ignored the feedback effects of EO and how self-efficacy forms (Peifer et al., 2020). Recent studies, such as the one conducted by Al-Kwifi et al. (2023), treated SE as an exogenous factor examining how individual EO, SE, and managerial skills impact project performance in Qatar. However, they overlooked the role of the favourable CE environment in nurturing risk-taking abilities, innovative thinking, and proactive behaviour in individual employees, which boost their self-efficacy. All these three constructs of EO imply actions that contribute to practical learning, and learning and skills attained in the course of the proactive or innovative behaviour with risks taken build up self-efficacy of employees (Sebora and Theerapatvong, 2010). There is no research suggesting that self-efficacy is an in-born trait. In contrast, it is something that is gained with experience (Pettersdotter et al., 2017). The more employees succeed at something, the more risks they take, the more self-efficacy they gain as previous experience reinforces their perception of themselves and their abilities (Achterkamp et al., 2015; Hung et al., 2021).

Another relevant study for linking CE, EO, and SE is Peng et al. (2023). The study collected data from CEOs and top managers of Chinese firms to explore how EO is influenced by top

management teams. The findings show that EO is positively associated with SE, and this relationship is strengthened by the level of collective efficacy of the top management team. As the latter can be linked to CE which directly affects EO, it is possible that EO may serve as a mediator in the CE-SE relationship. Based on the social cognitive theory, which was used as the foundation of the study conducted by Peng et al. (2023), I postulate that the individual's self-efficacy is developed in the course of practice, learning, and observations of others. At the same time, the constituents of CE such as management support and reinforcement are environmental factors to which individuals exposed. Organisations create the work environment by adjusting CE variables such as by giving more autonomy to employees. Individual traits developed by individuals in the workplace such as their risk-taking, innovativeness and proactiveness will be affected by these environmental CE factors, according to Social Cognitive Theory, and in turn will shape the level of the employee self-efficacy.

Following the Social Cognitive Theory, knowledge may play an important role in forming individual EO, in particular its risk-taking and innovativeness dimensions. It may be possible for CE to influence EO through learning and knowledge channels, making studies that link EO and SE with learning relevant for the potential mediating effect of EO on the CE-SE link. Learning may stem from the management support during trainings or from more timeavailability which employees will use to learn new skills on their own. This in turn will shape their EO traits such as innovativeness and proactiveness. People will be able to act more proactively based on the learning and support they received. That in turn will make them confident in what they know, increasing their self-efficacy. For example, Gorostiaga et al. (2019) examined the relationship between EO and SE in the context of vocational training. It was observed that a significant part of the variance in self-efficacy could be explained by the competitiveness, pro-activeness, and learning orientation dimensions of EO. These findings suggest that the mediator role of EO in the CE-SE link could be due to changes in how entrepreneurial process is perceived. Similar to Al-Kwifi et al. (2023), the study by Gorostiaga et al. (2019) used data collected from students, which may limit its relevance when it comes to corporate entrepreneurship. However, in contrast to the above studies Imran et al., (2019); Alarjani et al. (2020); Al-Kwifi et al. (2023), and Gorostiaga et al. (2019) explicitly considered effects of EO dimensions on SE, making it more relevant for the present analysis of the mediating role of EO in the CE-SE link. A related study is Shen et al. (2021) who reported that the effect of entrepreneurial learning on SE is moderated by EO, further suggesting that CE may indirectly influence SE through its knowledge and learning impacts on EO. Similar to Gorostiaga et al. (2019), the study Patwary et al. (2022) explored how self-efficacy may be influenced by EO. It was found that the innovativeness, riskiness, and pro-activeness

dimensions of EO had a significant positive effect on SE. While the study's scope was limited to the context of tourism entrepreneurs in Malaysia, it nevertheless provides evidence on the EO-SE link that is relevant to EO's mediation role in the CE-SE nexus.

The reviewed literature leads to the following hypothesis formulation:

H3: Entrepreneurial orientation mediates the positive effect of corporate entrepreneurship on the self-efficacy of employees in Abu Dhabi.

# 3.3. Moderating Effect of Well-Being

## 3.3.1. Moderating Effects of Well-Being on CE-El Nexus

The literature review by Gish et al. (2022) showed that the body of research linking well-being and entrepreneurship is still emerging, although more and more researchers are acknowledging potential linkages between well-being and entrepreneurial activities. While there is empirical research in the field that equates well-being of employees and their job satisfaction, thus viewing these variables as mainly endogenous (Liu and Liu, 2014; Ilies et al., 2024), recent studies on entrepreneurship shifted away from the concept of hedonic well-being, associated with satisfaction, to the concept of eudaimonic well-being, which focuses on the pursuit of meaning (Stephan et al., 2020; Williamson et al., 2021; Shir and Ryff, 2022; Nikolaev et al., 2023). As such, there has also been an increase in the amount of research that explored well-being as a variable that moderates behavioural factors in the workplace (Mathushan, 2022; Mendoza and Yan, 2023).

Generally, studies tend to employ the model of eudaimonic well-being proposed by Ryff (1989), which posits that entrepreneurial success and well-being are determined by six psychological processes, namely: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. All six dimensions of well-being have the potential to influence entrepreneurship (Ryff, 2019) and, in turn, the CE-EI nexus. For example, at higher levels of well-being, individual employees would be more likely to use the opportunities provided by the CE environment, such as greater autonomy, to pursue their entrepreneurial intentions more actively, as they will be seeking purpose in life and more effective implementation of their skills nurtured in the CE environment. In contrast, at lower levels of well-being, such a link between the CE environment and EI could be weaker due to the lack of internal motivation or drivers in employees (Nikolaev et al., 2023). The CE environment represents the external drivers of EI, and since all employees are different in their

internal well-being, the latter can significantly moderate the strength of the effect of the external drivers stemming from the CE environment and affecting EI. Thus, the different employees may exhibit different levels of sensitivity to the CE environment and, as an outcome, they will show different levels of EI, which would be difficult to explain without introducing and testing moderating variables, such as well-being, that represent internal drivers (Shir and Ryff, 2022; Shir et al., 2019). In fact, this could be one of the reasons why previous studies often attained mixed results when examining the direct effects of the CE environment on EI (Stephan et al., 2020; Stephan et al., 2023; Boudreaux et al., 2022).

These considerations lead to the following hypothesis:

H4a: At higher levels of well-being, there is a stronger positive effect of corporate entrepreneurship environment on the entrepreneurial intentions of employees in Abu Dhabi.

## 3.3.2. Moderating Effect of Well-Being on CE-OC Nexus

Increasing globalisation and competition in the job market have made it difficult for organisations to attract and retain a talented workforce. As a result, organisations are continuously adopting strategies to value human capital and contribute towards their wellbeing and greater organisational commitment (Arasanmi and Krishna, 2019). However, the direct relationship between the CE environment and OC is not stable, which is evidenced by the mixed results from the previous literature. While some researchers reported that various dimensions of the CE environment, such as management support, autonomy, rewards, and time availability, stimulate retention of employees and organisational commitment (Lee et al., 2021; Gulyani and Sharma, 2018; Nwekpa et al., 2020), others provided different findings of no significant associations between the CE environment and OC (Miedaner et al., 2018). Such discrepancies between the previous studies hint at the possibility of the existence of the omitted variable bias, which can be addressed by finding and testing the influence of moderating factors. Following the logic from the analysis of the moderating effects in the CE-El nexus, it can be expected that since the CE environment represents mostly external drivers, the moderating effects would be exhibited by internal factors that drive the individual's decision to stay or leave the organisation. This is similar to how internal drivers, along with external drivers, could predict the intentions of individuals to engage in entrepreneurial activities.

Employee well-being is often demonstrated when individuals thrive to excel at their tasks for the interests of the organisation. Boyd and Nowell (2020) noted that several organisational factors can lead to better, content and satisfied employees. Organisations that take care of the well-being of their employees are more likely to see more workplace engagement and higher organisational commitment. Borst (2018) also suggested that work engagement increases when there is better availability of job resources such as autonomy, managerial support, and cooperation with colleagues. These two findings suggest that in some way or another, the CE environment is linked to the well-being and OC is linked to well-being. The direction of causality is straightforward: OC comes after well-being because happier and more satisfied employees in their workplace will be more committed to the organisation. They stay because they found a purpose and enjoyment with the company. Now it is important to justify why well-being moderates, rather than mediates, the associations between the CE environment and OC.

In a mediating relationship, the mediating variable is not purely exogenous but would be affected by the CE environment. If well-being were solely derived from the CE environment, it could have been a mediator, but well-being should not be confused with job satisfaction in the workplace (Abdelmoteleb, 2019). The scale adopted in this thesis looks at well-being as a broader concept representing the individual's internal feelings of being cheerful and joyful not only in the organisation but in life. When employees bring this attitude of well-being to the workplace and face the CE environment, they are expected to respond to the CE environment in a different way than the individuals with a low level of well-being. This would create a situation where the CE environment could make happy and cheerful employees with high levels of well-being more committed to the organisation because their happy feelings are reinforced, and, at the same time, the CE environment may not be effectively stimulated OC in employees who do not feel cheerful. They will be looking for something else that will give them pleasure and make them more productive and useful (Abdullah et al., 2021).

Previous studies such as Boyd and Nowell (2020) who found that employees who feel valued are more willing to stay with the organisation look at a narrower measure of well-being that could be confused with job satisfaction or being valued at work. While this emphasises a potential direct effect of well-being on the organisational commitment, combining the results generated by Borst (2018) with those provided by Boyd and Nowell (2020), it is possible to state that the resources comprising CE such as autonomy, management support and time availability would play an even stronger positive role in building the organisational commitment when employees also score high on well-being in general, compared to the employees who receive the same CE resources but are not happy either at work or life in general. Such a distinction leads to the need to test the potential moderating effects produced by well-being on the relationship between CE and OC (DiPietro et al., 2020; Kundi, 2021; Singhal and Rastogi, 2018).

Based on the reviewed literature, it is possible to formulate and justify the following hypothesis of the study:

H4b: At higher levels of well-being, there is a stronger positive effect of corporate entrepreneurship environment on the organisational commitment of employees in Abu Dhabi.

# 3.3.3. Moderating Effect of Well-Being on CE-SE Nexus

Previous research demonstrates a significant influence of various dimensions of the CE environment on the self-efficacy of employees working in organisations. For instance, the employees who were given more autonomy at their tasks demonstrated higher levels of selfefficacy, suggesting that management decisions to give more freedom to employees pay off, and employees become more confident in their ability to propose innovative solutions when there is no time pressure and strict oversight of their work (Afzal et al., 2019; Nguyen and Malik; 2020). There is also evidence of a strong positive influence of management support, another dimension of the CE environment on the level of self-efficacy among employees (Shabsough et al., 2021; Choi and Presslee, 2023). These findings suggest that external factors, such as the CE environment in which employees work, stimulate SE. However, another body of literature proposes that internal factors, such as learning abilities, past experience of employees, and their emotional state, also strongly affect the level of SE (Marshall et al., 2020; Lange and Kayser, 2022). While there is sufficient research on the direct effects of these internal characteristics on SE (Lyngdoh et al., 2018; Machin et al., 2019; Hsu et al., 2019), not many studies considered the interactions between the external drivers and internal factors of employees' SE. This presents the opportunity to combine the CE environment dimensions with internal characteristics, such as the level of employee's wellbeing.

Employees with access to workplace resources and support feel more confident in their abilities (Choi and Presslee, 2023). Hence, they have a higher level of self-efficacy. They are also able to navigate complex situations with ease. At the same time, greater well-being reinforces this relationship between CE factors and SE (Lange and Kayser, 2022).

There are several ways in which well-being can moderate the effects of the CE environment on self-efficacy of employees. First of all, employees with stronger physical and emotional health, which constitutes the overall well-being, will tend to be more responsive to the support provided by managers and their advice (Billett et al., 2023). As a result, this management support will inspire greater self-efficacy in such employees compared to those with lower level

of well-being, who, due to stress, cannot heed the advice and use the management support effectively.

Second, if the employees exhibit low levels of well-being, they may respond differently to more autonomy at work. Instead of feeling more responsibility and flexibility, they will feel more isolated and left alone (Omreore and Nwanzu, 2022). Thus, instead of the expected boost in self-efficacy that would be present in employees with healthy well-being, they will demonstrate no growth in self-efficacy. Third, a similar argument relates to the effectiveness of time availability in stimulating self-efficacy. If the employees already reach the stage of burnout, which is the opposite to well-being, they will not know what to do with the extra free time they were given. They will be digging the same tasks but spending even more time on them and believing they are a failure (Nguyen and Malik; 2020). This would result in no growth in self-efficacy compared to the employees with high levels of well-being, who will treat the extra time availability as an opportunity to invest this time in education and skill building, which will boost their self-efficacy. The employees with burnout will not have the energy to spend this extra time on additional learning and skills development (Omreore and Nwanzu, 2022).

Given the above arguments, I expect that employees with more well-being will also demonstrate a greater positive influence of the CE environment variables such as management support, time availability, autonomy and reinforcement on their self-efficacy compared to people working in the environment with their well-being worse off. This is because those who experience more wellbeing will be also more receptive to the features of CE in their firm.

Considering that well-being does not come only from the environment but arises also from the employee internal traits (Joo et al., 2016), it can be viewed as an exogenous factor, and since previous studies showed that people who believed that the organisation cared for them and were more satisfied were also more responsive to CE stimuli from the organisation, it can be expected that moderating effects will hold in relation to the association between CE and SE as the latter will be enhanced faster under the influence of CE in people who are already cheerful and satisfied than among people who feel distressed. This allows for formulating the following hypothesis:

H4c: At higher levels of well-being, there is a stronger positive effect of corporate entrepreneurship environment on the self-efficacy of employees in Abu Dhabi.

- 3.4. Moderating Effects of Hyperactivity
- 3.4.1. Moderating Effects of Hyperactivity on CE-El Nexus

It has already been argued in the discussion of the direct effects of the CE environment on EI that if employees are given more autonomy in their projects, more time available for learning and skill development, fair rewards, and sufficient management support, they will tend to exhibit greater entrepreneurial intentions (Muralidharan and Pathak, 2018; Harrison et al., 2018; Nielsen et al., 2019). It was also suggested that the CE environment is mostly an external driver of the EI, and internal characteristics could moderate this relationship. One of the internal characteristics distinguished in literature on entrepreneurship is the level of hyperactivity, which is also sometimes referred to as Attention-Deficit/Hyperactivity Disorder (ADHD) symptoms. In relation to ADHD, hyperactivity entails excessive physical activity, restlessness, and inability of employees to remain calm in situations when they are expected to focus (Yu et al., 2021).

There is no consensus in the recent literature on the extent to which ADHD symptoms or hyperactivity can moderate the relationship between the CE environment and EI, with researchers suggesting that there could be both impairing and beneficial effects (Antshel, 2018; Bernoster et al., 2020; Wismans et al., 2020; Yu et al., 2021; Tucker et al., 2021). On the one hand, individuals with ADHD-type traits may tend to positively approach new problems and situations (Hatak et al., 2021; Stappers and Andries, 2022). They may be more likely to not premediate when facing uncertainty, which could be a major advantage in entrepreneurship. As a result, given sufficient resources, autonomy, and time, which constitute the CE environment, they will be able to do more and generate more creative and innovative ideas than a normal person in the same environment, which reflects the greater sensitivity of El to the CE environment for employees with hyperactivity. On the other hand, individuals with ADHD may have difficulties with persevering and maintaining focus (Antshel, 2018; Lerner et al., 2019; Tucker et al., 2021). As a result, if they were put in a more flexible CE environment with more autonomy and time availability, they would spread their efforts and attention on many projects, losing the focus. Such employees would not be able to translate a favourable CE environment into EI, as they will not be committed to a single project or a single goal (Stappers and Andries, 2022; Hatak et al., 2021).

The CE environment at work may be perceived differently by people with ADHD symptoms, which will result in a different outcome relating to entrepreneurial intentions (Antshel, 2018). Specifically, the best person-environment fit is usually reported for a highly stimulating environment, which is more likely to occur in entrepreneurial settings. Overall, this view is supported by empirical literature, suggesting that individuals with ADHD-type traits may be attracted to, and perform well in work environments that better match their distinctive personality traits. For instance, a large-scale study by Lerner et al. (2019) demonstrated that

individuals with ADHD are more likely to self-select towards entrepreneurial activity and, given the favourable CE environment, the ADHD symptoms will reinforce the CE effects on EI. Likewise, Antshel (2018) found that it is mainly the hyperactivity symptoms that are leading to stronger effects of the CE environment on entrepreneurship. Meanwhile, Hatak et al. (2021) reported that entrepreneurs with ADHD symptoms perform better when they experience passion for developing and founding. At the same time, Tucker et al. (2021) demonstrated that ADHD traits may reduce the efficacy of individuals in an entrepreneurial context, especially when it comes to recognising opportunities.

Similar findings to Lerner et al. (2019) and Antshel (2018) were reported by Stappers and Andries (2022), who observed that hyperactivity and attention deficit can reinforce the effects of the CE environment on entrepreneurial intention. However, the study also found that inattentiveness hampers the effects of the CE environment on entrepreneurial behaviour. The results of Stappers and Andries (2022) agree with Lerner et al. (2019), Wismans et al. (2020), and Yu et al. (2021), who also emphasised the importance of differentiating between inattentive symptoms and hyperactivity symptoms, which may explain the discrepancies between positive moderation and negative moderation of the link between the CE environment and El. Notably, Lerner et al. (2019) argued that, while the riskiness and complexity of entrepreneurship may be attractive to individuals with ADHD, the reality of entrepreneurship could be much less motivating and exciting. However, CE may involve fewer administrative and formal tasks compared to starting a business, potentially making CE environment especially appealing to people with ADHD symptoms. This would allow for expecting that for people with higher levels of hyperactivity, the association between CE and EI will be positive and stronger compared to the people without hyperactivity. While there is limited previous research that has tested the moderating effects of hyperactivity in regards to the all dimensions of the CE environment and EI relationship, there are studies that provided mixed findings for moderating role of hyperactivity in other contexts, which by analogy may be expected to apply for the CE-EI nexus as well. For example, according to Pollock et al. (2016), hyperactivity positively and significantly moderates the association between emotional intelligence of people and their success in relationships. However, in a professional context, previous studies such as Halbesleben et al. (2013) mostly report the negative moderating role of hyperactivity in the relationships between work related constructs such as between the work engagement of employees and their performance. Since Halbesleben et al. (2013) also noted that employees with hyperactivity had problems with focusing on specific work tasks that required strict deadlines and requirements, it can be expected that if such employees were given more work autonomy and time-availability, the two CE factors, they will be more effective in their entrepreneurial intentions and work performance compared to the employees without hyperactivity. This leads to the formulation of the following hypothesis for the testing:

H5a: At higher levels of hyperactivity, there is a stronger positive effect of corporate entrepreneurship environment on the entrepreneurial intentions of employees in Abu Dhabi.

# 3.4.2. Moderating Effect of Hyperactivity on CE-OC Nexus

The CE environment can either break or stimulate the organisational commitment, depending not only on the leadership but also on how individual employees respond to the CE environment. In a baseline scenario, previous research predominantly shows that employees who enjoy greater management support exhibit higher levels of loyalty and commitment to the organisation in which they work (Lee et al., 2021; Jung et al., 2020). There is also evidence that rewards and reinforcement positively contribute to organisational commitment (Neessen et al., 2019; Ahmed et al., 2020). However, these direct effects may not hold equally well for all types of employees, and it is important to investigate how the CE-OC nexus will vary for the people with high level of hyperactivity compared to the rest of the employees.

Work planning, execution, anticipation, and recollection are some of the common issues observed in individuals with hyperactivity. Compared to other employees, individuals with hyperactivity often have problems with maintaining focus on specific tasks and they also tend to display signs of impulsiveness at the workplace, which can trigger issues with maintaining organisational commitment among such individuals (Nagata et al., 2019). Employees with hyperactivity also find it difficult to follow directions and take complete control of their job, according to Nagata et al. (2019), which may suggest that they will respond differently to management support than the people without hyperactivity, resulting in a different CE-OC relationships. Nagata et al. (2019) observed that hyperactive individuals often find it challenging to start their careers or withstand their existing job positions, which suggests that they may be inclined to exhibit not only weaker OC but also weaker sensitivity to the CE environment compared to employees without hyperactivity. This is because of their difficulty in staying focused and maintaining concentration on their work performance. Agnew-Blais and Michelini (2023) agreed that individuals with hyperactivity exhibit lower work performance and lack skills to efficiently complete the assigned task. This makes it difficult for them to stay committed to a specific organisation for a long time.

Furthermore, Sonuga-Barke et al. (2023) suggested that individuals with hyperactivity often try to choose and modify their environment based on their intellectual capacity. This reduces their work efficiency and leads to underperformance at work. At the same time, the employees

with ADHD may be more inclined to stay in the organisations where their behaviour is reinforced and rewarded, which can show a significantly stronger positive association between the CE environment and OC for hyperactive employees compared to the rest of the employees (Oscarsson et al., 2022). This hints at the possibility of a significant moderating role played by hyperactivity in the CE-OC relationship.

At the same time, the above evidence is not universal, as multiple studies associated hyperactivity in adults with reduced work performance and lowered organisational commitment, suggesting that its moderating role could be negative in the CE-OC relationship (Nagata et al., 2019; Rosario-Hernández et al., 2020; Oscarsson et al., 2022; Sonuga-Barke et al., 2023; Rosario-Hernández et al., 2020). However, these studies did not provide enough data to make conclusive judgements about the significance of the moderation. Furthermore, it is possible that the CE environment will be tailored differently to employees with hyperactivity and other employees with the former requiring more management support (Seemab and Faisal, 2023). This implies that people with hyperactivity will be receiving more management support than other employees and, as a result, the CE association with OC will be stronger among hyperactive individuals. This suggests that there could be expected significant positive moderating effects of hyperactivity on the link between the CE environment, mainly proxied by management support, and OC.

This stream of thought leads to the formulation of the following hypothesis of moderating effects to be tested:

H5b: At higher levels of hyperactivity, there is a stronger positive effect of corporate entrepreneurship environment on the organisational commitment of employees in Abu Dhabi.

## 3.4.3. Moderating Effect of Hyperactivity on CE-SE Nexus

The CE environment, such as the provision of more time for completing projects, giving more autonomy to employees, providing performance-based rewards, and offering managerial support, can positively affect self-efficacy of employees, which has been documented in a number of studies (Hidayah et al., 2019; Bargsted et al., 2019; Singh et al., 2019). However, it is not yet fully evidenced how this relationship between the CE environment and SE will hold for employees with hyperactivity compared to the rest of the employees.

Previous research has mixed evidenced with some studies emphasising that hyperactivity can have a negative impact on the self-efficacy of employees at a workplace (Di Lorenzo et al., 2021; Song et al., 2021; Weibel, et al., 2020). However, these studies imply direct effects rather than interactions with the CE environment, and the evidence of moderating effects is

rather scarce (Song et al., 2021). However, in contrast to the earlier studies (Weibel et al., 2020; Di Lorenzo et al., 2021; Song et al., 2021) that established a negative relationship between hyperactivity and self-efficacy, there are arguments that hyperactivity can boost the effects of the OC environment on self-efficacy (Bury et al., 2020; Chang and Edwards, 2015; Schunk and Pajares, 2009). Furthermore, Hajek and Hans-Helmut (2019) argued that people with visible signs of hyperactivity are more likely to believe in their abilities to achieve their goals and exhibit a higher level of self-efficacy, which also suggests a positive association.

The previous studies that emphasised the negative direct or moderating effects of hyperactivity on self-efficacy made an explicit assumption that people with hyperactivity would fail at tasks due to multitasking or the lack of focus (Leroy et al., 2020). However, this assumption does not have to hold especially in a favourable CE environment. Moreover, people with hyperactivity are expected to value the autonomy and time availability offered by the CE environment more than other employees (Champ et al., 2023), and, as such, the positive effects of these dimensions of the CE on SE will be stronger among hyperactive people than among the other employees who do not urgently need so much autonomy and freedom to perform tasks at which they will excel.

The arguments above allow for formulating the following hypothesis to be tested in this research:

H5c: At higher levels of hyperactivity, there is a stronger positive effect of corporate entrepreneurship environment on the self-efficacy of employees in Abu Dhabi.

# 3.5. Moderating Effects of Fear of Failure

## 3.5.1. Moderating Effects of Fear of Failure on CE-El Nexus

The positive effects of the CE environment on entrepreneurial intentions of employees are not stable and vary from study to study, which can be explained not only by sampling issues but also the omitted variable bias. Similar to individual characteristics of well-being and hyperactivity, another internal driver, the fear of failure, may change the association between the CE environment and EI (Kong et al., 2020; Hunter et al., 2021; Duong, 2022).

Fear of failure in entrepreneurship literature is treated as a psychological factor that acts as a barrier to entrepreneurial behaviour (Cacciotti et al., 2016). From this perspective, fear of failure is understood as a motive to avoid failure, which contrasts with the motive to achieve success. Fear of failure is naturally linked to the disposition to becoming anxious or feeling shame (Ng and Jenkins, 2018; Chua and Bedford, 2016). When employees in the workplace are given more autonomy to perform their tasks, there is a growing risk that they fail at it. As

such, for the people who naturally have predisposition to fear failure, the work autonomy provided by the CE environment will lead to weaker entrepreneurial intentions compared to the people who do not have such fear of failure (Cacciotti et al., 2016; Wennberg et al., 2013; Koudstaal et al., 2016). This may explain why in some cases the CE environment stimulates El and in other cases there is no such effect. Individual characteristic of employees exposed to the CE environment moderate this relationship.

In a similar way, when employees are provided performance-based rewards, as a part of the CE environment, to motivate innovativeness and creativity, there will be a higher level of EI, as the employees will be seeing that risk taking, which is a part of entrepreneurship, is rewarded. They will be less likely to play safe, and their creativity may be boosted (Chua and Bedford, 2016; Hunter et al., 2021; Morgan and Sisak, 2016). However, when fear of failure comes into play, the effects of rewards on EI may weaken. This is especially the case when there is not only positive reinforcement but also negative reinforcement of employees. They more they have to lose in the case of a failure, and the more they have to gain in the case of a success will determine the extent of their EI, but at higher levels of fear of failure, the negative reinforcement will dominate and the effects of the CE environment on EI will be weaker. This can also be explained by the risk-aversion hypothesis that stems from the prospect theory (Nagaya, 2023). This theory posits that the pain from potential losses tends to be greater than a similar gain from a potential success. Thus, people with greater fear of failure will also be more risk and loss averse, which will result in weaker effects of the CE environment on entrepreneurial intentions of such people.

These considerations lead to the following hypothesis:

H6a: At higher levels of fear of failure, there is a weaker positive effect of corporate entrepreneurship environment on the entrepreneurial intentions of employees in Abu Dhabi.

## 3.5.2. Moderating Effect of Fear of Failure on CE-OC Nexus

The positive role of the CE environment in stimulating the OC was well documented and build such an environment could be one of the effective strategies, not only for staff retention but also for attracting and keeping more employees with an entrepreneurial mindset (Zhang and Liu, 2022; Hasan et al., 2021; Farrukh et al., 2017; Boatemaa et al., 2019). However, the fear of failure among employees can change the way in which the CE environment affects the OC. In the fast-paced work environment, failures are prevalent in everyday work. While failure has a negative impact on some employees, it also has a positive influence on the professional goals of other employees. Zhou et al. (2020) conducted a study on 381 full-time employees in

China and observed that fear of failure can reinforce the positive association between the support from supervisors and the commitment of the employees to the organisation. The study also noted that a supportive and friendly work environment can eventually help employees in overcoming their fear of failure. Similar observations were made by Kalmanovich-Cohen et al. (2018).

In another study, Dong (2022) and Huang et al. (2019) stated that fear of failure is an essential motivating factor in the context of organisational commitment. Dong (2022) also linked fear of failure with an individual's risk-taking behaviour. The study stated that fear of failure arises when employees are concerned about their skills. As a result, they avoid motivation and fail to engage in diverse tasks. Additionally, some individuals prefer to be more cautious and work on achievable tasks in order to avoid potential failures. Individuals with emotions of fear of failure are also hesitant to change and prefer staying committed to a single organisation. Moreover, Manuoglu (2023) also agreed that fear of failure not only decreases the confidence of individuals but also lowers their intention to quit the current organisation.

In contrast to the way in which the fear of failure reduces the effects of the CE environment on EI, the same fear of failure will be causing employees to anchor their career to a safe haven, where this fear can be eventually reduced. As a result, when employees with strong fear of failure enjoy managerial support, which is a part of the CE environment, they will tend to be more committed to this organisation where they found the support, and, therefore, the CE-OC link for such employees will be stronger compared to the employees with lower levels of the fear of failure.

The same logic applies to the moderation of the CE-OC relationship when the CE environment is represented by greater work autonomy, time availability, and rewards. When provided with more work autonomy, employees with greater fear of failure will be more dedicated to the project and more attentive to details so that it would not fail and the trust of the organisation in the employee would not be broken. This will strengthen the ties to the company and inspire the desire to meet the expectations and be more committed to the work and the organisation (Dahlin et al., 2018; Finstad et al., 2019; Zhou et al., 2020). Hence, it can be predicted that at higher levels of fear of failure, the CE-OC link will be stronger.

Based on the literature reviewed above, it is possible to deduce the following hypothesis:

H6b: At higher levels of fear of failure, there is a stronger positive effect of corporate entrepreneurship environment on the organisational commitment of employees in Abu Dhabi.

## 3.5.3. Moderating Effect of Fear of Failure on CE-SE Nexus

Success in educational and professional endeavours has been recognised as a significant factor behind the development of an individual's self-confidence (Nelson et al., 2019). On the other hand, self-confidence is identified as the foundation of self-efficacy for individuals starting their professional careers. If the organisation has strong CE environment characterised by management support, provision of work autonomy for tasks, and performance-based rewards and compensation, there will be a positive stimulus for building SE in employees. However, Cacciotti et al. (2020) noted that not all employees working in the same CE environment will have the same level of self-efficacy. This relationship would be sensitive to individual and societal pressures with fear of failure being the most common among others. These findings were similar to that study conducted by Ng and Jenkins (2018) who also claimed that fear of failure could moderate the effects on the self-efficacy of employees working in an organisation.

While several studies highlighted the importance of management support and work autonomy on self-efficacy, very few explored the differences in these effects among people with higher and lower levels of the fear of failure (Çetin and Aşkun, 2018; Vieira et al., 2018; Ghani et al., 2019; Hidayah et al., 2019; Na-Nan and Sanamthong, 2020). To fill this gap in the literature, Ng and Jenkins (2018) conducted a study on 182 students enrolled in the Australian university. The study identified that with high rates of business failure, new entrepreneurs are more likely to face fear of failure. It also observed that fear of social consequences of failure often reduces the self-efficacy and minimises the effects of the CE environment on self-efficacy.

On the other hand, few studies established a link between the mind set of an individual, fear of failure and self-efficacy (Zanchetta et al., 2020; Noskeau et al., 2021). Zanchetta et al. (2020) observed that fear of failure is common in employees who regularly receive feedback from the management. This suggests that fear of failure can interact with the management support in CE environment and alter its effect on SE.

There is a stream of research that distinguished fear of failure as a significant moderator in various contexts and relationships. For example, based on Kong et al. (2020) it can be expected that at higher levels of fear of failure, the elements comprising corporate entrepreneurship will have a weaker effect on self-efficacy of employees compared to the individuals who have less fear of failure. Since self-efficacy is associated with confidence of employees in their abilities to perform entrepreneurial actions, the evidence from Kong et al. (2020) has relevance for predicting the similar moderation of the CE-SE relationship by the same fear of failure.

This moderation effect of fear of failure was also conceptualised in the theoretical model of Attitude-Intention-Behaviour Gap by Duong (2023). They empirically validated their model using a sample of 611 respondents among whom the moderating effect by fear of failure was

negative and statistically significant. This allows for assuming that a similar moderating effect of fear of failure on the CE-SE association will also hold.

The arguments above allow for generating the following hypothesis of the study:

H6c: At higher levels of fear of failure, there is a weaker positive effect of corporate entrepreneurship environment on the self-efficacy of employees in Abu Dhabi.

# 3.6. Summary

This chapter has presented the conceptual framework of this study and provided a discussion of research hypotheses and how they have been developed. The chapter started with the visualisation of the conceptual framework to demonstrate the key theoretical constructs used in the study. Then, the hypotheses on direct associations between CE, EI, OC, and SE were developed and presented. This was followed by the discussion of mediating effects of EO in these relationships with arguments why there could be not only direct but also indirect effects. The chapter ended with the discussion of moderating effects of individual characteristics such as hyperactivity, well-being, and fear of failure. The details on how each variable is measured and how the hypotheses are tested are provided in the following chapter.

# Chapter 4: Methodology

This chapter explains how the empirical study is designed, what approach has been used and what research method has been implemented to analyse the primary data collected from the survey. The chapter also covers the data and sampling issues including how the participants were selected, what questions they were asked and what tools have been used to record and measure the data, including the information on previously validated scales adopted in the questionnaire.

## 4.1. Research Design

The research into the associations between corporate entrepreneurship, entrepreneurial orientation, entrepreneurial intentions, organisational commitment, and self-efficacy is approached from the epistemological stance of positivism, which advocates the use of the scientific method and relies on the assumption that social phenomena, similar to natural phenomena, are objective and exist independent of the mind of the specific researcher who investigates the phenomenon. Therefore, social phenomena such as corporate entrepreneurship can be studied in a value-free way by using appropriate scales to measure theoretical constructs and establish statistical relationships between them. Thus, new knowledge is generated using rigor and deduction, which is an approach specific to the epistemology of positivism emphasising that theoretical concepts should be tested in specific real-life contexts to validate existing theories in social sciences (Schmaus, 2020). This epistemological stance contrasts with interpretivism, which is concerned with the individual interpretations of the same phenomenon, not claiming that there is one single supreme view that dominates the rest (Kankam, 2019). The choice of positivism as the research epistemology has been made because of the researcher's belief that social constructs, once formed by members of society, remain stable and live independently from the individual members. In fact, the established social structures shape future social relationships and predict how they will be developing. As such, the approach adopted in this thesis is based on deduction, rather than alternative approach such as induction, abduction or falsification theory because the former implies testing the formulated research hypotheses whereas induction is the way of reasoning and developing new hypotheses from observations (Saunders et al., 2019). The previous chapter has formulated the hypotheses based on the available theoretical literature and previous empirical evidence. The goal of this chapter is to explain how these hypotheses have been tested in this study.

This research is designed as a quantitative study where theoretical constructs, also referred to in this study as latent variables or simply constructs, are measured using specific observed

items that can be generated by means of surveying respondents and obtaining their answers to questions that would represent these observed items. In order to quantify the responses and make each item of the questionnaire measurable, this research adopts the seven-point Likert scale that ranges from 1 (strongly disagree) to 7 (strongly agree). Even though this scale is not represented by continuous numbers, it allows for ordering the responses from the lowest to the highest. This enables the researcher to process the data quantitatively. Further, the availability of too many observed variables would consume many degrees of freedom in regression analysis and, therefore, dimension reduction procedures are performed on the Likert scale measures. Data transformation using the Confirmatory Factor Analysis (CFA) and evaluated with Cronbach's alpha, used in this research, allow not only for reducing the number of inputs in the regression analysis to a few meaningful factors, but also converting the ordinal variables to real numerical variables through standardisation of the factors (Salem and Hussein, 2019). This procedure allows for testing the analytical model using fewer inputs and using traditional regression analysis instruments. The method of data analysis and the analytical model are presented in the next section.

#### 4.2 Research Method

The present study employs the ordinary least squares (OLS) regression modelling to assess relationships between CE, EO, EI, SE, and OC. The baseline empirical model is specified as follows:

$$EI(OC, SE) = \beta_0 + \beta_1 CE + \beta_2 Controls + \varepsilon$$
 (1)

Where CE is a vector of corporate entrepreneurship constructs including Work Autonomy, Time Availability, Management Support and Rewards. Controls is a vector of control variables including age, gender, education, work experience, tenure, position, company size company, its age, and sector. This baseline model is then extended by mediating and moderating variables. The mediating effects were tested using a two-stage regression. At the second stage, the following equation was estimated:

$$EI(OC, SE) = \beta_0 + \beta_1 CE + \beta_2 EO + \beta_3 Control + \varepsilon$$
 (2)

At the first stage, the following regression was run:

$$EO = \beta_0 + \beta_1 CE + \beta_2 Control + \varepsilon$$
 (3)

A significant mediation is detected if  $\beta_1$  from equation (3) shows statistical significance and  $\beta_2$  from equation (2) shows statistical significance. This detection of mediation is based on the Sobel test, which recommends this three-stage procedure described in equations (2), (3) and (4) (Jiang et al., 2021; Du et al., 2023).

The moderating effects were measured by computing interaction terms between individual characteristics and CE variables and adding them to the regression. The model with moderating effects has the following specification:

$$EI(OC, SE) = \beta_0 + \beta_1 CE + \beta_2 EO + \beta_3 IC + \beta_4 IC * CE + \beta_5 Control + \varepsilon$$
 (4)

Where IC is a vector of individual characteristics comprised of Fear of Failure, Wellbeing and Hyperactivity.

The use of linear regression fits the study's objectives and research hypotheses, as this method allows for assessing a set of path-specific hypotheses (Gefen et al., 2000; Cangur and Ercan, 2015). Another advantage of linear regression is that it does not necessarily require strong theoretical base, and may support both exploratory and confirmatory analysis (Nair and Das, 2012; Xia and Yang, 2019; Lei and Wu, 2007; Heene et al., 2011; Savalei, 2018).

Since each construct is comprised of several observed variables, it is first important to go through the data reduction procedure before running regressions, which is done using the Confirmatory Factor Analysis (CFA) along with the estimation of Cronbach's alpha for internal reliability of the scales used. In order for the CFA to distinguish factors based on the observed variables, the items comprising each latent factor should be correlated. In other words, they should have some common variance. However, due to the fact that the items in the questionnaire were measured using a seven-point Likert scale, which is an ordinal data type, the traditional Pearson correlation coefficient will not be applicable. In this case, a solution is to estimate the monotonic relationship between the items using rank correlations coefficients such as the Spearman correlation.

#### 4.3 Data and Sampling

The research methodology is based on the quantitative research design and uses primary data retrieved by means of structured questionnaires administered among employees of private sector entities in Abu Dhabi. Although limiting the scope does not allow for exploring country-level and region-level factors that may influence entrepreneurship constructs, focusing on a specific context ensures that no such effects are present which should help minimise omitted variables bias. Since the sample may not be fully capturing the characteristics of private organisations in developing countries, statistical inferences from the sampling frame may only be directly applicable to the target population of organisations operating in the UAE and Abu Dhabi in particular. While the sample of companies used in this research includes those from the oil and gas industry, they are not the majority of the sample, and since many oil and gas companies are either state-owned or closely affiliated with the state, it would be difficult to claim that the results could extend to other oil-rich places that have

similar cultural heritage as the UAE. The results have implications for other private businesses that focus on innovation and human capital development.

The study uses non-probability sampling due to the inability to get access to a full sampling frame from which respondents could be drawn randomly to minimise potential bias from omitted firm-level and individual-level variables. The random sampling technique implies that the respondents are randomly drawn from the population rather than conveniently selected (Li et al., 2023). The main advantage of random sampling technique is that it allows for making inferences for the population as it is more representative. However, the main weakness of this method is that it is often difficult to put in practice as a significantly large sampling frame is required to draw a random sample (Panzner et al., 2016). An alternative non-probability sampling technique has been used as it allowed for gaining access to potential respondents, and the issues with generalisability have been addressed by increasing the sample size.

The choice of the sample size depends on several factors including the level of confidence, the margin of error, the types of statistical analyses, and the size of the target population. For the present study, the final sample of 497 respondents has been gathered by sending out 3,000 questionnaires to businesses in Abu Dhabi. This resulted in the response rate of 16.6%. This final sample of 497 has been attaining after filtering out incomplete responses and blank questionnaires. While the analysis does not allow for making international generalisations, this sample size is sufficient for making generalisations within Abu Dhabi. The respondents in the study come from diverse backgrounds in terms of their gender, age, level of education, overall work experience, experience with the specific company, and position they hold in the company. This background information is presented in the next chapter using frequencies tables. In addition to this, the company background information was retrieved using questionnaires. This information includes the age of the company, the total number of staff employed by the company, and the industry to which the company belongs.

Among the variables representing the background information on respondents, the age variable has been measured on the interval scale. There are nine age categories covering 5 years each. In contrast to the age variable, education was measured on the ordinal scale. This means that the observations were also split into different categories that were numbered and arranged in the ascending order starting from the lowest level of education, namely: less than high school, to the highest level of education represented by post-graduate degrees including PhD. However, while in the case of the age variable, the distance between each category was relatively the same and equal to 5 years, it is not possible to say that the difference between bachelor's degree and high school degree is the same or similar to the difference between post-graduate degrees and bachelor's degrees. Therefore, this is the ordinal scale rather than interval scale. The ordinal scale was also used in the presentation of years of experience of

the respondents. In order to facilitate the questionnaire completion, the respondents were given multiple choice answers with ranges of years which they could select as the most fitting to their work experience. Position in the company was measured on the nominal scale with four categories representing employees, leaders, managers and senior managers. The variable for company age was measured on the interval scale. The variable for the company size has been measured on the ordinal rather than interval scale, as the intervals between age groups are not equal. However, it is possible to treat the companies in the first and second group, namely those with 1-49 employees, as small companies. The companies with 50-249 employees can be considered medium enterprises, and the companies with more than 250 employees are large companies.

# 4.4 Study Tool and Measures

The paper adopts the survey strategy as it is a flexible approach that has been widely used in exploratory, explanatory, and descriptive research (Saunders et al., 2019). The study uses structured questionnaire as the main data collection instrument as it allows for collecting and comparing standardised data from a large number of respondents (Bryman and Bell, 2018). Questionnaires are particularly suited for gathering answers to standardised questions which fits the positivist philosophy (Saunders et al., 2019) adopted in the present study. This choice also follows previous entrepreneurship literature on CE, EO, EI, SE, OC, and relationships between them.

The measurement scales used in the present study are summarised in Table 1.

Table 1. Model constructs and corresponding scales

| Construct                        | Source                | Items      |
|----------------------------------|-----------------------|------------|
| Corporate Entrepreneurship (CE)  | Hornsby et al. (2013) | Appendix A |
| Entrepreneurial Orientation (EO) | Covin et al. (2020)   | Appendix B |
| Entrepreneurial Intention (EI)   | Liñán and Chen (2009) | Appendix C |
| Organisational Commitment (OC)   | Meyer et al. (1993)   | Appendix D |
| Self-efficacy (SE)               | Chen et al. (2001)    | Appendix E |
| Well-being                       | WHO (1998)            | Appendix F |
| Hyperactivity                    | Kessler et al. (2007) | Appendix G |
| Fear of failure                  | Conroy et al. (2002)  | Appendix H |

The rest of the section elaborates on each of the scales and its items in more detail.

#### 4.4.1. CE Scale

One of the most common tools for measuring CE is the Corporate Entrepreneurship Assessment Instrument (CEAI) developed by Hornsby et al. (2002) (see also: Hughes and Mustafa, 2017; Elia and Margherita, 2018; Kreiser et al., 2021). The present study uses the

most recent updated version of CEAI, which is comprised of four factors corresponding to the key dimensions of CE: management support, autonomy, rewards/reinforcement, and time availability (Hornsby et al., 2013). Hornsby et al. (2013) performed a comprehensive analysis of content and structural validity of the instrument and showed that it was convergent with EO. While this convergence was only statistically significant, meaning the correlation coefficients between the CE and EO constructs were significantly different from zero, they were not strongly related based on the magnitude of the coefficients. Hornsby et al. (2013, p.950) admit:

"the factors of the CEAI were related to EO as expected; the magnitudes of these relationships, however, were not as strong as expected".

Hence, their evidence does not allow for concluding that CE and EO represent the same construct and are indistinguishable.

The first antecedent from the revised CEAI of Hornsby et al. (2013) is top management support (MS), understood as the willingness of top-level managers to facilitate and promote entrepreneurial behaviour, such as promotion of innovative ideas, or providing employees with the resources required for them to take entrepreneurial actions. The MS dimension is represented by five questionnaire items (see Appendix A for all items). A typical MS item reads as follows: 'Senior managers encourage innovators to bend rules and rigid procedures in order to keep promising ideas on track' (Appendix A). The second antecedent is autonomy, defined as the commitment of top-level managers to provide freedom in decision-making, tolerate failure, and delegate authority. The WD dimension is represented by five questionnaire items (see Appendix A for all items). A typical WD item reads 'I seldom have to follow the same work methods or steps for doing my major tasks from day to day' (Appendix A).

The third antecedent of managers' entrepreneurial actions in the revised CEAI of Hornsby et al. (2013) is rewards/reinforcement (RR), understood as having systems that reward individuals based on their performance, encourage engaging with challenging work, and highlight their achievements. The RR dimension is represented by three questionnaire items (see Appendix A for all items). A typical RR item is 'My supervisor will give me special recognition if my work performance is especially good' (Appendix A).

The final antecedent is time availability (TA), defined as the managers' ability to structure the work in such a way that individuals have the time to pursue innovations. The TA dimension is represented by five questionnaire items (see Appendix A for all items). A typical TA item reads as follows: 'During the past three months, my workload kept me from spending time on developing new ideas' (Appendix A).

#### 4.4.2. EO Scale

Following similar research, for EO, the present analysis uses the 9-item scale developed by Covin et al. (2020). The scale is an adaption of the widely employed scale of Covin and Slevin (1989) from measuring firm-level EO to individual EO. The instrument considers three major components of EO, namely proactiveness, innovativeness, and risk taking (see Appendix B for all items measuring these three constructs). Participants are asked to indicate the extent to which they agree with the items on a seven-point scale. The scale is anchored with totally disagree and totally agree choices. While there are alternative scales for measuring EO, such as the one developed by Bolton and Lane (2011), they were rejected as they were developed in the context of students whereas the scale produced by Covin et al. (2020) was formulated for employees and team managers.

The scale proposed by Covin et al. (2020) consists of nine items. Three items correspond to the innovativeness dimension of individual EO, defined as an employee's willingness to seek novel solutions to work-related tasks. A typical item reads 'When it comes to problem solving, I always search for creative solutions instead of familiar ones' (Appendix B). Next, three items represent the proactiveness dimension of individual EO, which is understood as an employee's bias toward discretionary action when responding to new value creation opportunities. A typical item reads 'I always actively help internal clients, and not only when I am asked or approached to do so' (see Appendix B for a list of all items). Finally, three items represent the risk-taking dimension of individual EO, which is defined as an employee's willingness to undertake unauthorised tasks with uncertain outcomes. A typical item reads 'I sometimes provide assistance to internal clients without first discussing this with my supervisor' (see Appendix B for a list of all items). The scale is suitable for the present study as it explicitly measures individual EO, in contrast to the widely used scale of Covin and Slevin (1989) which focused on the strategic posture at the level of managers. This allows for exploring mediation effects of individual EO in the relationships between CE and outcome variables, namely EI, OC, and SE.

#### 4.4.3. El Scale

The scale developed by Liñán and Chen (2009) is one of the most popular instruments for measuring individual EI (Lee-Ross, 2017; Bilgiseven, 2019; Youssef et al., 2021). The model comprises four dimensions, namely personal attitude, subjective norm, perceived behavioural control, and entrepreneurial intention. Since the present study focuses on EI itself, only the latter scale is used which is in line with similar research on entrepreneurial intention (Lee-Ross, 2017; Bilgiseven, 2019; Youssef et al., 2021). The responses are made on a 7-point Likert scale with anchors ranging from 1 (total disapproval) to 7 (total approval).

The El scale of Liñán and Chen (2009) consists of six items. The items are general sentences that indicate different aspects of intention. A typical questionnaire item for El reads as follows: 'I will make every effort to start and run my own firm' (see Appendix C for a list of all items). The items are worded to highlight intention ('I intend to ...') rather than desire ('I want to ...') or self-prediction ('How likely it is ...'). It is not clear whether interest and intention are sufficiently similar to use measures worded as desire. Liñán and Chen (2009) noted that measures worded as behavioural intention showed slightly better results at predicting behaviour. Essentially, the El scale of Liñán and Chen (2009) is based on the theory of planned behaviour. The intention of engaging in entrepreneurial behaviours could be influenced by several factors, including beliefs, needs, habits, and values. Motivational antecedents comprise cognitive factors that affect El. In addition, there may be situational factors that influence El by shaping the individual's attitudes toward entrepreneurship. This may include task difficulty, time constraints, and social pressure, among others. It is these situational factors that the present study focuses on, namely direct and indirect influences of CE.

#### 4.4.4. OC Scale

A common instrument for measuring OC is the tool developed by Meyer et al (1993) (see also: Karim and Noor, 2006; Ashman, 2007). The instrument comprises three six-item commitment scales (see Appendix D for a list of all items). The three scales correspond to the three OC dimensions, namely affective commitment, normative commitment, and continuance commitment. All responses are made on the Likert scales with verbal anchors ranging from "strongly agree" to "strongly disagree". Some studies have voiced concerns over construct redundancy and measurement issues of the OC scale, as well as suggested separating affective commitment from the rest of the scale (Jaros, 2007; Ashman, 2007; Abdullah, 2011). Since the focus of the present study is on the relationship between CE, EO, and OC as a whole, the analysis follows similar research (Bulut and Culha, 2010) in only using the affective commitment of Meyer et al (1993).

A typical questionnaire item reads as follows: 'I would be very happy to spend the rest of my career with this organization' (see Appendix D for the rest of the items). The scale is based on the perspective that commitment is a psychological state that not only characterises the employee's relationship with the organisation, but also has implications for the employee's decision to stay in the organisation. Employees who have a strong affective commitment would continue their membership in the organisation because they want to. The scale of Meyer et al. (1993) allows for measuring the degree of affective commitment by focusing on how the respondent feels about the organisation. A stronger affective attachment is expected for

employees whose experiences with the organisation have been consistent with expectations. It should be reiterated that the present study limits its scope to affective commitment as an outcome variable, ignoring potential direct and indirect effects of CE on continuance commitment and normative commitment. This is done to focus on entrepreneurship and concepts of self-efficacy and individual EO, which are naturally more linked with what employees want to do (affective commitment), rather than with what they need to do (continuance commitment) or feel they ought to do (normative commitment).

#### 4.4.5. SE Scale

Self-efficacy is measured using the 8-item scale of Chen et al. (2001). The scale offers a short but valid tool that correlates highly with goal orientation, motivation, and individuals' overall belief in their competence. The scale has been commonly used in entrepreneurship research to measure general self-efficacy (Bönte and Piegeler, 2013; Vuorio et al., 2018; Yang et al., 2020).

A typical item from the SE scale reads as follows: 'I will be able to achieve most of the goals that I have set for myself' (see Appendix E for a list of all items). The social cognitive theory implies that SE beliefs can be characterised along three dimensions, namely magnitude, strength, and generality. Chen et al. (2001) argued that researchers tend to focus on specific SE, and emphasised the need to consider general SE which has more trait-like generality dimension of SE. The scale employed in the present study measures general SE. Specific SE is understood as a motivational state, while general SE is viewed as a motivational trait (Chen et al., 2001). While both general SE and specific SE reflect an individual's ability to achieve desired outcomes, the two constructs differ in the degree of generality or specificity. General SE is more resistant to transitory influences and is a better construct to represent individuals' perception of their ability to meet task demands (Yang et al., 2020).

#### 4.4.6. Wellbeing Scale

Eudaimonic well-being is measured using the WHO-5 well-being index developed by the World Health Organisation (WHO, 1998). The scale contains five simple and non-invasive questions, and has adequate validity as an outcome measure (Krieger et al., 2014; Topp et al., 2015). In a recent study linking well-being and entrepreneurship, Stephan et al. (2020) used a similar approach in measuring eudaimonic well-being based on the WHO-5 scale.

A typical item from the WHO-5 well-being scale reads as follows: 'My daily life has been filled with things that interest me in the last 2 weeks' (see Appendix F for a list of all items). A high score indicates a high state of well-being. A low raw score suggests poor wellbeing, and may indicate that the respondent suffers from depression. Overall, the WHO-5 scale has shown

good psychometric properties (Krieger et al., 2014). The structure of the scale mirrors that of the Major Depression Inventory, which measures the ICD-10 symptoms of depression. More comprehensive extensions of the WHO-5 scale exist, including the WHO-10 scale, and a 28-item rating scale (Topp et al., 2015). One of the main differences is that WHO-5 only includes positively phrased items, allowing for clearly measuring well-being rather than distress or anxiety. The WHO-5 scale is also short and generic, which makes it suitable for application outside of the healthcare context, in particular in research on entrepreneurship (Stephan et al., 2020).

#### 4.4.7. Fear of Failure Scale

Fear of failure is measured using the Performance Failure Appraisal Inventory (PFAI) of Conroy et al. (2002). The PFAI has been commonly used in entrepreneurship research (Mitchell and Shepherd, 2010; Wood et al., 2014; Ng and Jenkins, 2018). The short five-item version is used as it demonstrated high validity (Conroy et al., 2002).

A typical item from the PFAI scale reads as follows: 'When I am failing, I am afraid that I might not have enough talent' (see Appendix H for all items). Fear of failure may be associated with mental health, problems with achievement, and moral development (Conroy et al., 2002). It is possible that fear of failure can motivate individuals to reach higher levels of performance. Similarly, fear of failure may also prevent individuals from successfully completing tasks and actualising their potential. The scale of Conroy et al. (2002) is rooted in the cognitive-motivational-relational theory of emotion, and focuses on five aversive consequences of failing. This includes experience of embarrassment and shame, uncertain future, devalued self-esteem, upsetting important others, and losing social influence. The full version of the PFAI contains 41 items, and does not produce a single score for general fear of failure. This is why the present study uses the short version of the scale. The short version only contains five items, which is enough to capture all aversive consequences of failing identified by Conroy et al. (2002).

### 4.4.8. Hyperactivity Scale

Attention-Deficit/Hyperactivity Disorder (ADHD) is measured using a 6-item version of the Adult ADHD Self-Report Scale (Kessler et al., 2005; Kessler et al., 2007). The 6 most predictive items from the full measure are used as a screener for subclinical levels of ADHD which have been linked to entrepreneurial activity (Bernoster et al., 2020). Participants are instructed to indicate how they have felt and conducted themselves on a scale of 1 ('Never') to 5 ('Very Often').

A typical item from the ADHD self-report scale is as follows: 'How often do you have trouble wrapping up the final details of a project, once the challenging parts have been done?' (see Appendix G for a list of all items). The full ADHD self-report scale, ASRS, contains 18

questions, and is based on the DSM-IV Criterion A symptoms of ADHD in adults. A shorter version of the instrument is more suitable for the present study, as the focus is on entrepreneurship rather than healthcare implications. The 6-item ASRS has been demonstrated to have adequate specificity, sensitivity, and total classification accuracy (Kessler et al., 2007). It is possible that some aspects of ADHD can be positively leveraged in the context of entrepreneurial activity. In particular, ADHD may affect the individual's mindset, EI, EO, and willingness to pursue self-employment.

All the responses representing each item were coded using the Likert scale. Therefore, the theoretical constructs such as EI, OC, SE and CE are measured using items on the ordinal scale. This means that there is a specific order of the responses where the value of 1 indicates a lower degree of agreement or more negative response compared to the next consecutive value 2. However, it is impossible to state that the difference between 1 and 2 is exactly the same as the difference between 2 and 3 or 3 and 4. Hence, the Likert scale cannot be treated as an interval scale. This limits some mathematical and statistical procedures with the data. In particular, the raw data for each item comprising CE, EI, OC and SE cannot be normally distributed because normal Gaussian distribution implies that the values should be continuous rather than discrete. However, once factors are extracted from the observed ordinal variables, these factors will be continuous and normality tests such as the Shapiro-Wilk procedure can be performed.

# 4.5. Summary

In conclusion to this chapter, it is valid to recap what the thesis has addressed so far before presenting original findings. The exploration of the impact of Corporate Entrepreneurship (CE) environment on various aspects of employee attitudes and behaviours is imperative in the dynamic context of the private sector in Abu Dhabi. This research is motivated by the recognition that understanding how the CE environment influences entrepreneurial intentions (EI), self-efficacy (SE), and Organisational Commitment (OC) can provide valuable insights into the factors shaping the professional landscape in the area.

The previous chapters have set the aim and objectives of the research (Chapter 1), reviewed theories and empirical evidence from the past research (Chapter 2), developed the analytical framework and formulated hypotheses (Chapter 3), and discussed how these hypotheses would be tested (Chapter 4).

The research hypotheses emerged from the need to systematically examine and validate the relationships between key CE factors and their anticipated outcomes based on gaps in the literature on this subject. The belief that management support, increased work autonomy,

attractive rewards, reinforcement mechanisms, and enhanced time availability within the CE framework are positively correlated with entrepreneurial intentions, organisational commitment, and self-efficacy is rooted in the premise that a conducive entrepreneurial environment fosters a positive and engaged workforce.

Furthermore, the inclusion of Entrepreneurial Orientation (EO) variables as potential mediators adds a layer of complexity, aiming to unravel the mechanisms through which CE may exert its influence. The hypothesis suggests that EO, encompassing dimensions of risk-taking, innovation, and proactiveness, may mediate the impact of CE on the targeted outcomes.

Additionally, the incorporation of moderating factors related to individual differences in entrepreneurial intentions, such as well-being, hyperactivity, and fear of failure, extends the constructed analytical model. It recognizes the nuanced interplay between personal attributes and the organisational environment, emphasizing that the influence of CE may vary based on individual characteristics.

# Chapter 5: Data Processing

This chapter aims to demonstrate the descriptive statistics, frequencies tables and correlations between the variables as well as how the data have been processed to compute the final latent variables measuring the theoretical constructs from the analytical model. The chapter begins with the presentation of the survey responses using frequencies tables. This is followed by factor analysis aimed at the data dimension reduction to obtain the constructs based on theories covered in the literature review.

# 5.1. Background Information

This section presents the background information on the respondents and their companies using graphical and tabular form employing frequencies tables. Frequencies tables are the preferred choice of presenting the data measured on the nominal, interval, or ordinal scale. This is because traditional descriptive statistics such as the arithmetic mean and standard deviation cannot be computed for such data because they require mathematical operations such as division, which are possible only with data measured on the ratio scale (Jenkins, 2020).

The responses surveyed in this research were of two types: those who were affiliated with specific companies through employment contracts and those obtained through LinkedIn. The dual data collection approach allowed the researcher to increase the sample size and increase the speed of primary data collection, making it more efficient. The distribution of the sample by these two types of respondents appears as follows.

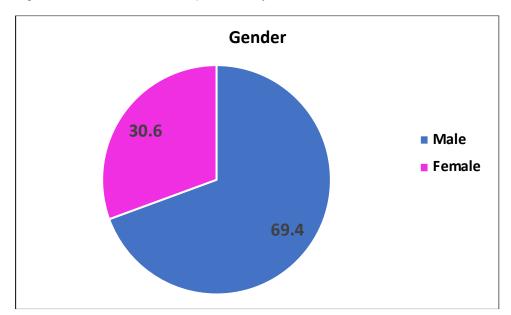
From the full sample of respondents, 63.6% of responses were from company-affiliated professionals, while 36.4% came from LinkedIn (Table 2). The absolute numbers of survey participants from LinkedIn and company affiliation are presented in the frequencies table.

Table 2 Frequencies and Percentages of Respondents According to Source of Participation

| Setup    | Frequency | Percentage (%) |
|----------|-----------|----------------|
| Company  | 316       | 63.6           |
| LinkedIn | 181       | 36.4           |
| Total    | 497       | 100            |

Regarding the demographic data on the respondents, the sample is dominated by male participants (Figure 4).

Figure 4. % Distribution of Respondents by Gender



Source: author's original data

Female respondents constitute 30.6% of the total sample whereas male professionals make up 69.4% of the sample. This disproportion can be explained by the specifics of the labour market in Abu Dhabi where substantially higher labour force participation rates are demonstrated by male workers than female employees (Figure 5).

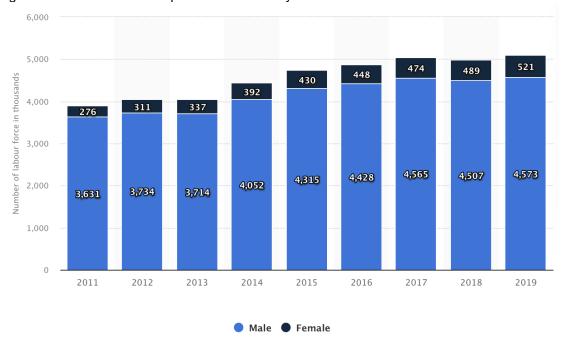


Figure 5 Labour Force Participation in the UAE by Gender

Source: Statista (2023)

Thus, the asymmetric distribution of male and female research participants in this study does not create a problem for the generalisation on the Abu Dhabi labour market as this distribution is indicative of the overall market structure. However, the evidence from Statista (2023) suggests that women comprise less than 10% of the total labour force whereas in the survey conducted, women are more represented than in reality as they constitute up to 30% of the total sample size.

In terms of age, the research participants demonstrated the following demographic distribution evidenced in the frequencies table below.

Table 3 Distribution of Respondents by Age Category

| Age Group | Frequency | Percentage (%) |
|-----------|-----------|----------------|
| 21-25     | 36        | 7.2            |
| 26-30     | 60        | 12.1           |
| 31-35     | 211       | 42.5           |
| 36-40     | 81        | 16.3           |
| 41-45     | 60        | 12.1           |
| 46-50     | 35        | 7              |
| 51-55     | 8         | 1.6            |
| 56-60     | 2         | 0.4            |

| Older than 60 | 4   | 0.8 |
|---------------|-----|-----|
| Total         | 497 | 100 |

Source: original data

It has been assumed that some of the respondents in the category over 60 years old would be retiring soon and this could affect some of their answers. However, considering that this particular group does not account for more than 0.8% of the total sample, it is not expected to significantly affect the results. Overall, the most populous age category is represented by research participants from 31 to 35 years old. They constitute 42.5% of the total sample. There is also a slight tendency for the sample to be dominated by older respondents than younger ones as research participants aged 36-40 years old constitute 16.3% of the sample whereas employees who are 26-30 years old account for only 12.1% of the sample. The youngest research participants aged 21-25 years old comprise 7.2% of all respondents, and people under the age of 21 were not surveyed. The proportion of people aged 26-30 years old is similar the number of those who were 41-45 years sold. Both age groups include 60 respondents each, and they represent about 12.1% of the total sample. Older respondents constitute lower shares of the total sample. Table 4 shows the age distribution of the respondents by gender.

Table 4 Age Distribution by Gender

|                  |           | What is yo | What is your gender? |       |
|------------------|-----------|------------|----------------------|-------|
|                  |           | Female     | Male                 | Total |
| How old are you? | 21-25     | 10         | 26                   | 36    |
|                  | 26-30     | 16         | 44                   | 60    |
|                  | 31-35     | 67         | 144                  | 211   |
|                  | 36-40     | 23         | 58                   | 81    |
|                  | 41-45     | 22         | 38                   | 60    |
|                  | 46-50     | 10         | 25                   | 35    |
|                  | 51-55     | 2          | 6                    | 8     |
|                  | 56-60     | 1          | 1                    | 2     |
|                  | Beyond 60 | 1          | 3                    | 4     |
| Total            |           | 152        | 345                  | 497   |

It is evident that age distribution by gender is rather symmetric with the majority of both men and women being in the category from 31 to 35 years old.

The respondents also varied in terms of their academic achievements. The distribution of respondents by the level of their education is provided in Table 5.

Table 5 Distribution of Respondents by the Level of Education

| Education Level                                     | Frequency | Percentage (%) |
|---|-----------|----------------|
| Less than high school                               | 5         | 1              |
| High school   | 17        | 3.4            |
| Two-year college degree or vocational school        | 61        | 12.3           |
| Bachelor Degree (Three to four-year college degree) | 331       | 66.6           |
| Post graduate degree, Master degree or PhD          | 83        | 16.7           |
| Total   | 497       | 100            |

Source: original data

The majority of the research participants, namely: 66.6% of the total sample, have bachelor's degrees, which is three to four-year college degree in Abu Dhabi. Almost 17% of the respondents have a post-graduate degree such as master's degree or PhD. Thus, both the surveyed professionals with higher education constitute more than 83% of all respondents. The percentage of those who only finished high school is small, being equal to 3.4%. The respondents who did not finish even high school accounted for only 1% of the total sample. Thus, the composition of the research participants is dominated by those with higher education.

Next, the respondents have been distinguished by their overall experience represented by the number of years (Table 6).

Table 6 Distribution of Research Participants by Their Work Experience

| Years of Experience           | Frequency | Percentage (%) |
|-------------------------------|-----------|----------------|
| Less than 1 year              | 28        | 5.6            |
| One to less than 2 years      | 27        | 5.4            |
| Two to less than 3 years      | 44        | 8.9            |
| Three to less than 5 years    | 38        | 7.6            |
| Five to less than 10 years    | 174       | 35             |
| Ten to less than 15 years     | 95        | 19.1           |
| Fifteen to less than 20 years | 60        | 12.1           |
| More than 20 years            | 31        | 6.2            |
| Total                         | 497       | 100            |

Source: original data

The sample is very diverse in terms of the experience of employees. Some, namely: 5.6% of the sample, had less than a year of work experience whereas others (6.2%) had more than twenty years of experience. The majority of the respondents, or to be exact, 35% of the total sample, indicated that they had from five to ten years of experience. The second largest group

of respondents is those who had from ten to fifteen years of experience. This pattern suggests that the sample has much more observations from more experienced employees than from less experienced employees. Thus, while there is clear evidence of central tendency of the data concentrated around the median frequency, there is presence of some asymmetries in responses.

The respondents differ not only in their overall experience in the profession but also in their experience with the current company, which can proxy the employee loyalty to the company. The distribution of the research participants by years of experience at their organisation is reported in Table 7.

Table 7 Distribution of Research Participants by Their Work Experience with Current Employer

| Years of Experience with Current Employer | Frequency | Percentage (%) |
|---|-----------|----------------|
| Less than 1 year                          | 113       | 22.7           |
| One to less than 2 years                  | 92        | 18.5           |
| Two to less than 3 years                  | 122       | 24.5           |
| Three to less than 5 years                | 59        | 11.9           |
| Five to less than 10 years                | 64        | 12.9           |
| Ten to less than 15 years                 | 31        | 6.2            |
| Fifteen to less than 20 years             | 6         | 1.2            |
| More than 20 years                        | 10        | 2              |
| Total                                     | 497       | 100            |

Source: original data

This distribution is very different from the distribution of respondents' overall work experience. The significant difference corresponds to the fact that companies in Abu Dhabi show relatively high employee turnover rates. More than 22% of the research participants covered in this sample had less than a year of experience with the current employer. Overall, more than 65% of the respondents had less than three years of experience with their current employer. The most loyal employees with more than 20 years of experience with the same company comprise only 2% of the total sample. Thus, in contrast to the overall experience, the data distribution is not concentrated at the median values but at the extreme left point indicating strong asymmetry and low average loyalty to the company.

The background information on the research participants also provides their distribution by the position in the company, as reported in Table 8.

Table 8 Distribution of Respondents by Their Position in the Company

| Position in the company | Frequency | Percentage (%) |
|-------------------------|-----------|----------------|
| Employee                | 361       | 72.6           |
| Leader                  | 20        | 4              |
| Manager                 | 78        | 15.7           |
| Senior manager          | 38        | 7.6            |
| Total                   | 497       | 100            |

Source: original data

General employees constitute the majority of the sample, namely: 72.6% of the respondents. They are followed by managers who account for 15.7% of the research participants. Senior managers and leaders represent the minority of the sample holding a 4% and 7.6% of the total sample, respectively. This implies that the results of the survey will be mostly generalisable to employees who constitute most of the sample. However, it is also important to consider the differences in responses based on the position of the research participants in the company.

Besides the demographic information on individual respondents, the survey included background information on the companies with whom the research participants were affiliated. These background characteristics include the company's age, industry, and size measured by the number of staff.

Table 9 demonstrate the distribution of the companies by their age.

Table 9 Distribution of Companies by Age

| Company Age          | Frequency | Percentage (%) |
|----------------------|-----------|----------------|
| Less than 5 years    | 27        | 5.4            |
| 5 to 10 years        | 42        | 8.5            |
| 11 to 15 years       | 65        | 13.1           |
| 16 to 20 years       | 52        | 10.5           |
| Beyond 20 years      | 122       | 24.5           |
| I do not know at all | 189       | 38             |
| Total                | 497       | 100            |

Source: original data

About 38% of the respondents did not know the age of their company, which can be explained by the previous finding of the relatively short experience of the research participants with their current employer. Hence, they may not have enough information on the company history, or

they may not be interested in this information. Excluding these observations where the respondents did not know the age of the company, it can be observed that the sample is strongly skewed towards more experienced and mature companies with more than 20 years of experience. Young companies with less than five years of experience constitute only 5.4% of the sample. A quite similar distribution of companies by their size is observed in the sample, as reported in Table 10.

Table 10 Distribution of Companies by Size (Measured by the Number of Staff)

| Company Size (by Staff) | Frequency | Percentage (%) |
|-------------------------|-----------|----------------|
| 1 to 9                  | 15        | 3              |
| 10 to 49                | 75        | 15.1           |
| 50 to 249               | 114       | 22.9           |
| 250 or more             | 143       | 28.8           |
| I do not know at all    | 150       | 30.2           |
| Total                   | 497       | 100            |

Source: original data

The majority of the respondents, namely: 30.2% did not know the size of their company. Based on the information that could be provided by respondents, it has been found that the sample is dominated by larger companies whereas small companies with fewer than 10 employees constitute only 3% of the total sample. This correlates with the age of the companies, which allows for assuming that more mature companies are also larger companies with more staff. It can be stated that the sample is rather balanced with small companies (those having 1-49 employees) comprising 18.1% of the total sample, medium companies (with 50-249 employees) making up 22.9% of the sample and large companies (more than 250 employees) constituting 28.8% of the total sample.

Finally, the background information on the companies from which the respondents were drawn show their distribution by industry (Table 11).

Table 11 Distribution of Companies by Industry

| Industry                       | Frequency | Percentage (%) |
|--------------------------------|-----------|----------------|
| Automobile                     | 14        | 2.8            |
| Healthcare                     | 27        | 5.4            |
| Manufacturing and construction | 78        | 15.7           |
| Oil and Gas                    | 61        | 12.3           |
| Other                          | 38        | 7.6            |
| Professional Services          | 162       | 32.6           |

| Raw materials | 19  | 3.8  |
|---------------|-----|------|
| Real Estate   | 38  | 7.6  |
| Technology    | 60  | 12.1 |
| Total         | 497 | 100  |

Source: original data

The majority of the respondents in the sample (32.6%) come from companies working in the professional services sector. Other sectors in the descending order are manufacturing and construction (15.7%), oil and gas (12.3%), technology (12.1%), real estate (7.6%), healthcare (5.4%), raw materials (3.8%), and automobile (2.8%).

In summary, this sub-section has disclosed the demographic and background information on respondents and their companies. The analysis of demographic background information has shown that out of the participants, 69.4% were male, while 30.6% were female. The majority fell within the age range of 31-35 years (42.5%). In terms of educational attainment, the majority (66.6%) held bachelor's degrees. Regarding work experience, the largest percentage of employees (24.5%) had worked for their current employer for two years or less, while 22.7% had been with their current employer for less than a year. The majority of the respondents (72.6%) were employees, while 15.7% were managers. Only 7.6% were senior managers, and 4% held leadership positions. About 32.6% of the participants worked in the professional services sector, 15.7% in the manufacturing and construction sector, 12.1% were affiliated with oil and gas or technology companies, 7.6% were real estate professionals, 5.4% worked in the healthcare sector, 3.8% worked for raw materials industries, and the smallest percentage (2.8%) were employed by automobile businesses. Roughly 7.6% of the participants worked in other sectors.

This background information helps paint the profile of the sample of employees working in the private sector of Abu Dhabi. While previous statistical evidence from Statista (2023) shows that women are greatly underrepresented in the labour market, the participation rate of women in this research is somewhat higher than suggested by Statista (2023). The next section proceeds with data exploration.

# 5.2. Data Exploration

Data exploration begins with the analysis of responses using frequencies tables. Then, the linear associations between individual observed variables are assessed using the correlations

analysis. After this, factor analysis is performed in order to reduce the dimensions of data to get theory-based constructs from the observed variables.

# 5.2.1. Frequencies Tables for Observed Variables

Since the responses indicating the key observed variables are measured on the ordinal scale, the frequencies tables are used for their presentation along with descriptive statistics such as the mean and standard deviation, where appropriate.

# 5.2.1.1. Corporate Entrepreneurship Measurement

Corporate Entrepreneurship related concepts have been represented by four categories, namely: autonomy, time availability, management support, and rewards. This categorisation is supported by previous research such as Moraes et al (2023) and Kassa and Raju (2015). Table 12 provides the frequencies table for the autonomy construct measured by five observed variables from the scale published by Hornsby et al. (2013).

Table 12 Frequencies Tables for Autonomy Measures of Corporate Entrepreneurship

|                    | CE1<br>(Freedom) | CE2 (Own<br>Responsibility) | CE3 (Much<br>Autonomy) | CE4 (Own<br>Boss) | CE5 (Variety at<br>Work) |
|--------------------|------------------|-----------------------------|------------------------|-------------------|--------------------------|
| Strongly disagree  | 21.7             | 5.2                         | 3.4                    | 7.2               | 3.6                      |
| Disagree<br>Mildly | 4.8              | 15.1                        | 7.4                    | 10.8              | 6.8                      |
| disagree           | 12.2             | 16.7                        | 22.7                   | 18.5              | 16.9                     |
| Neutral            | 14.5             | 30.5                        | 24.5                   | 34.1              | 29.9                     |
| Mildly agree       | 31.7             | 13.7                        | 25.7                   | 17.9              | 30.1                     |
| Agree<br>Strongly  | 7.4              | 10.2                        | 9.2                    | 8.2               | 9.6                      |
| agree              | 7.6              | 8.6                         | 7                      | 3.2               | 3                        |
| Total              | 100              | 100                         | 100                    | 100               | 100                      |
| Mean               | 3.79             | 3.94                        | 4.13                   | 3.78              | 4.13                     |
| Std. Dev.          | 1.912            | 1.642                       | 1.488                  | 1.470             | 1.362                    |

Source: Author's original data

### Notes:

- CE1. I have the freedom to decide what I do on my job.
- CE2. It is basically my own responsibility to decide how my job gets done.
- CE3. I have much autonomy on my job and am left on my own to do my own work.
- CE4. I feel that I am my own boss and do not have to double-check all of my decisions with someone else.
- CE5. I seldom have to follow the same work methods or steps for doing my major tasks from day to day.

The first question measuring autonomy in the context of CE has a pattern of responses that contrasts with other questions. When the research participants were asked if they had the freedom to decide what they do on their job, the majority (31.7%) mildly agreed with this statement, but another large group of respondents (21.7%) strongly disagreed. Such contrasting positions are not found in the rest of the statements on autonomy. For example, when the respondents were asked whether it was their own responsibility to decide how their job gets done, the majority (30.5%) provided neutral responses but there was a clear tendency for disagreement as more responses disagreed than agreed with this proposition. The same applies to CE4 when the research participants were asked whether they felt like their own boss and did not have to double-check all their decisions with someone else. While the majority of the responses were neutral (34.1% of the respondents), there was also a slightly stronger tendency to disagree with this statement, suggesting that in spite of a given level of freedom the respondents enjoyed, they could not feel like their own boss or had absolute freedom to decide what they could do on their job. However, the responses could be different for the research participants holding different positions in the company and having different relationships with supervisors, as evidenced by Dysvik and Kuvaas (2013).

In relation to the other two questions representing job autonomy, namely: CE3 and CE5, the research participants exhibited a greater tendency to agree rather than disagree with the statement that they have much autonomy on their job and they seldom have to follow the same work methods or steps for doing the major tasks from day to day. Overall, four out of five measures of work autonomy show similar patterns suggesting that respondents on average tend to view their job as the one in which they have some level of autonomy and discretion.

The next measure related to corporate entrepreneurship employed in this study is Time Availability. It was measured using a five-item scale (CE6-CE10) based on Hornsby et al. (2013), and the frequencies table for the responses associated with each observed variables from the Time Availability construct also shows some contrasting patterns (Table 13).

Table 13 Frequencies Tables for Time Availability Measures of Corporate Entrepreneurship

|                    | CE6 (Right<br>Amount of Time) | CE7 (Plenty<br>Amount of Time) | CE8 (Time<br>Constraints) | CE9 (Find<br>Time) | CE10<br>(Workload/No<br>Time) |
|--------------------|-------------------------------|--------------------------------|---------------------------|--------------------|-------------------------------|
| Strongly disagree  | 3.4                           | 2.8                            | 2.6                       | 3.8                | 19.1                          |
| Disagree<br>Mildly | 6.4                           | 7.8                            | 6                         | 5.8                | 7                             |
| disagree           | 16.1                          | 16.7                           | 12.9                      | 13.7               | 8.6                           |
| Neutral<br>Mildly  | 34.5                          | 30.3                           | 33.1                      | 26.3               | 14.1                          |
| agree              | 22.1                          | 30.3                           | 27.3                      | 30.1               | 38                            |
| Agree<br>Strongly  | 11.6                          | 8.6                            | 11                        | 14.1               | 8.8                           |
| agree              | 5.8                           | 3.4                            | 7                         | 6.2                | 4.4                           |

| Total             | 100<br>4.19 | 100<br>4.13 | 100<br>4.33 | 100<br>4.36 | 100<br>3.85 |  |
|-------------------|-------------|-------------|-------------|-------------|-------------|--|
| Mean<br>Std. Dev. | 1.429       | 1.348       | 1.408       | 1.466       | 1.824       |  |

Source: Author's original data

#### Notes:

CE6. I have just the right amount of time and workload to do everything well.

CE7. I always have plenty of time to get everything done.

CE8. I feel that I am always working with time constraints on my job.

CE9. My co-workers and I always find time for long term problem solving.

CE10. During the past three months, my workload kept me from spending time on developing new ideas.

The greatest contrast between the responses was evidenced for the CE10 variable where 19.1% of the research participants strongly disagreed with the statement that during the past three months, their workload kept them from spending time on developing new ideas. At the same time, 38% of the respondents mildly agreed with this statement and 14.1% of the respondents felt neutral. This contrast found only in this variable and not in the other observed variables measuring Time Availability can be explained by the fact that CE10 had a specific time bound, the past three months, whereas the rest of the variables were more general. Thus, the respondents provided more consistent responses to general questions rather than the more specific one.

Overall, for the rest of the measures of Time Availability more agreement rather than disagreement was observed among the research participants. They were found to be mostly neutral or mildly agree with the statements that they had just the right amount of time and workload to do everything well (CE6), they always had plenty of time to get everything done (CE7), they felt that they were always working with time constraints on their job (CE8) and they always found time for long-term problem solving with their co-workers (CE9).

Another measure related to corporate entrepreneurship explored in this study is management support, which was represented by five items based on Hornsby et al. (2013). Table 14 provides the frequencies table for each observed item measuring management support.

Table 14 Frequencies Tables for Management Support Measures of Corporate Entrepreneurship

|                                 | CE11<br>(Encouraging<br>Risk-Taking) | CE12<br>(Experimental<br>Project Support) | CE13<br>(Encouraging<br>Rule Bending) | CE14<br>(Encouraging<br>Innovative Ideas) | CE15<br>(Funding<br>New Ideas) |
|---------------------------------|--------------------------------------|---|---------------------------------------|---|--------------------------------|
| Strongly<br>disagree<br>Disagre | 5.2                                  | 6.4                                       | 4.8                                   | 3.6                                       | 6                              |
| e<br>Mildly                     | 12.9                                 | 12  | 9                                     | 7.4                                       | 9.6                            |
| disagree                        | 23.7                                 | 24.5                                      | 15.3                                  | 13.7                                      | 12.4                           |
| Neutral                         | 32.7                                 | 25.7                                      | 36.9                                  | 26.5                                      | 39                             |

| Mildly<br>agree   | 15.1  | 23.7  | 19.9  | 32.7  | 23.3  |
|-------------------|-------|-------|-------|-------|-------|
| Agree<br>Strongly | 7.8   | 5.6   | 9.4   | 10.8  | 7     |
| agree             | 2.6   | 2     | 4.6   | 5.2   | 2.6   |
| Total             | 100   | 100   | 100   | 100   | 100   |
| Mean              | 3.70  | 3.69  | 4.01  | 4.26  | 3.91  |
| Std. Dev.         | 1.404 | 1.413 | 1.443 | 1.436 | 1.392 |

Source: original data

#### Notes:

CE11. People are often encouraged to take calculated risks with ideas around here.

CE12. This business unit supports many small and experimental projects realizing that some will undoubtedly fail.

CE13. Senior managers encourage innovators to bend rules and rigid procedures in order to keep promising ideas on track.

CE14. Those employees who come up with innovative ideas on their own often receive management encouragement for their activities.

CE15. Money is often available to get new ideas off the ground.

These items show more symmetry compared to the measures of autonomy and time availability, which is evidenced by the absence of large numbers of responses concentrated on the either strongly disagree or strongly agree sides. Most of the responses show central tendency and are concentrated around the median value indicating neutrality. In particular, the concentration of responses at median values ranged from 25.7% of the sample for CE13 to 39% for CE15.

CE14 shows the strongest tendency for the research participants to agree with the statement that those employees who come up with innovative ideas on their own often receive management encouragement for their activities. At the same time, the research participants demonstrated predominant disagreement with the statement that people are often encouraged to take calculated risks with ideas around here (CE11). Such discrepancy indicates that post-factum companies have the tendency to appreciate innovative ideas among employees, but companies continue to remain risk-averse and mostly discourage taking high risks and experimenting. Thus, they hope to induce innovations with little risk. The companies also vary strongly on whether or not they will provide financing for innovative ideas when they are presented by employees. This is indicated by CE15. It can be expected that the level of financing will depend on the company size as suggested by Kijkasiwat and Phuensane (2020).

The last construct measuring corporate entrepreneurship is rewards and reinforcement. It has been measured using a three-item scale based on Hornsby et al. (2013). The frequencies table for the distribution of agreement and disagreement with the statements measuring rewards and reinforcement is reported in Table 15.

Table 15 Frequencies Tables for Rewards Measures of Corporate Entrepreneurship

|                      | CE16 (Special<br>Recognition) | CE17 (Praising<br>Outstanding Work) | CE18 (Performance-Based Rewards) |
|----------------------|-------------------------------|-------------------------------------|----------------------------------|
| Strongly<br>disagree | 4.2                           | 3.4                                 | 4                                |
| Disagree<br>Mildly   | 6.2                           | 5.6                                 | 5.6                              |
| disagree             | 14.1                          | 13.5                                | 13.1                             |
| Neutral              | 26.1                          | 35.7                                | 25.5                             |
| Mildly agree         | 31.1                          | 23.9                                | 32.5                             |
| Agree<br>Strongly    | 11                            | 10.6                                | 12                               |
| agree                | 7.2                           | 7.2                                 | 7.2                              |
| Total                | 100                           | 100                                 | 100                              |
| Mean                 | 4.31                          | 4.28                                | 4.38                             |
| Std. Dev.            | 1.489                         | 1.431                               | 1.475                            |

Source: original data

#### Note:

CE16. My supervisor will give me special recognition if my work performance is especially good.

CE17. My manager will tell his/her boss if my work was outstanding.

CE18. The rewards I receive are dependent upon my work on the job.

The response to all three statements about rewards and reinforcement demonstrate strong consistency among the research participants. For two out of three measures of rewards and reinforcement, the majority of the sample, namely: more than 30%, demonstrated mild agreement with the statements that the supervisor will give special recognition if the work performance is especially good, and the rewards they receive are dependent upon the work on the job. The responses in relation to the statement that the manager will tell his/her boss if the work was outstanding received mostly neutral response. However, another large group of the research participants (23.9% of the sample) mildly agreed that the manager would tell his or her boss if the work was outstanding. Thus, both rewards and recognition are found to be available in the surveyed companies.

In summary, the eighteen items describing corporate entrepreneurship demonstrate relative consistency in responses suggesting that these eighteen variables are likely to demonstrate strong internal reliability and measure the same theoretical construct, which will be further checked using the factor analysis.

### 5.2.1.2. Entrepreneurial Intentions Measurement

In contrast to the corporate entrepreneurship, which was broken down into four categories, entrepreneurial intentions were measured directly by a six-item scale from Liñán and Chen

(2009). No sub-categories were distinguished. Table 16 demonstrates the distribution of the various response options chosen by the research participants for each of the items measuring entrepreneurial intentions.

Table 16 Frequencies Tables for Entrepreneurial Intentions

|                      | EI1<br>(Readiness<br>) | El2<br>(Goal<br>) | EI3<br>(Effort<br>) | El4<br>(Determinatio<br>n) | EI5<br>(Serious<br>Thinking) | El6<br>(Firm<br>Intention) |
|----------------------|------------------------|-------------------|---------------------|----------------------------|------------------------------|----------------------------|
| Strongly<br>disagree | 20.9                   | 6.6               | 3.4                 | 3                          | 4.4                          | 3.8                        |
| Disagree             | 5.4                    | 12.2              | 8                   | 5.8                        | 6.2                          | 5.2                        |
| Mildly disagree      | 9                      | 17.7              | 21.9                | 13.7                       | 11                           | 11.6                       |
| Neutral              | 15.9                   | 32.1              | 24.5                | 35.1                       | 25.7                         | 26.3                       |
| Mildly agree         | 33.9                   | 13.3              | 25.5                | 22.7                       | 33.5                         | 29.3                       |
| <i>Agr</i> ee        | 6.8                    | 10.8              | 8                   | 11                         | 10.2                         | 14.3                       |
| Strongly agree       | 8                      | 7.2               | 8.6                 | 8.6                        | 8.8                          | 9.4                        |
| Total                | 100                    | 100               | 100                 | 100                        | 100                          | 100                        |
| Mean                 | 3.85                   | 3.91              | 4.15                | 4.32                       | 4.39                         | 4.48                       |
| Std. Dev.            | 1.906                  | 1.616             | 1.523               | 1.458                      | 1.511                        | 1.513                      |

Source: Author's original data

#### Note:

- EI1. I am ready to do anything to be an entrepreneur.
- El2. My professional goal is to become an entrepreneur.
- EI3. I will make every effort to start and run my own firm.
- El4. I am determined to create a firm in the future.
- El5. I have very seriously thought of starting a firm.
- El6. I have the firm intention to start a firm someday.

The responses to question EI1 stating that "I am ready to do anything to be an entrepreneur" show strong asymmetric pattern. While the majority of the research participants (33.9% of the total sample) mildly agreed with this statement, another large category of respondents constituting 20.9% of the sample strongly disagreed with this. In contrast, strong agreement with this statement was shown only by 8% of the respondents. This indicates that while the research participants want to be entrepreneurs, they are not fully ready to pay any price for this. Furthermore, the responses to EI2 stating that "my professional goal is to become an entrepreneur" demonstrate slight prevalence to disagree with this statement, suggesting that the research participants who work in a company do not often make it their professional goal to become an entrepreneur. In contrast to this, the respondents mildly agree with the statement that they are determined to create their own firm in the future as evidenced from the responses to the EI4 question and the research participants also have a tendency to agree that they will make every effort to run their firm, as seen from the responses measuring EI3. Again, there are minimum strong agreements with these statements suggesting that the research participants would not mind starting their own business, but it is not certain that they

will do anything to achieve this. On average from 7.2% to 9.4% have strong determinations to become entrepreneurs in the future. Mild determination is reported by 33.5% of respondents who had serious thoughts of starting a firm (EI5) and 29.3% of the research participants who have the firm intentions to start a firm someday.

# 5.2.1.3. Organisational Commitment Measurement

Organisational commitment was measured with six items based on Meyer et al. (1993), and their distribution is shown in Table 17.

Table 17 Frequencies Tables for Organisational Commitment

|                      | OC1<br>(Happy to<br>Stay) | OC2<br>(Problem<br>s) | OC3<br>(Belongin<br>g) | OC4<br>(Attachmen<br>t) | OC5<br>(Famil<br>y) | OC6<br>(Persona<br>I) |
|----------------------|---------------------------|-----------------------|------------------------|-------------------------|---------------------|-----------------------|
| Strongly<br>disagree | 18.3                      | 4.2                   | 11.4                   | 12.2                    | 13.3                | 1.8                   |
| Disagree             | 6.8                       | 11.2                  | 11                     | 9.8                     | 9.2                 | 4.8                   |
| Mildly disagree      | 7.6                       | 16.5                  | 22.1                   | 14.3                    | 13.5                | 8.8                   |
| Neutral              | 18.5                      | 33.5                  | 25.7                   | 35.3                    | 26.1                | 32.5                  |
| Mildly agree         | 32.3                      | 16.3                  | 23.3                   | 21.7                    | 30.7                | 29.3                  |
| Agree                | 7                         | 8.4                   | 4.8                    | 4.6                     | 5.8                 | 11.6                  |
| Strongly agree       | 9.4                       | 9.8                   | 1.6                    | 2                       | 1.4                 | 11                    |
| Total                | 100                       | 100                   | 100                    | 100                     | 100                 | 100                   |
| Mean                 | 3.95                      | 4.07                  | 3.56                   | 3.63                    | 3.71                | 4.57                  |
| Std. Dev.            | 1.891                     | 1.586                 | 1.486                  | 1.491                   | 1.556               | 1.418                 |

Source: Author's original data

#### Note

OC1. I would be very happy to spend the rest of my career with this organization.

OC2. I really feel as if this organization's problems are my own.

OC3. I do not feel a strong sense of belonging to my organization (reverse-coded).

OC4. I do not feel emotionally attached to this organization (reverse-coded).

OC5. I do not feel like part of the family at my organization (reverse-coded).

OC6. This organization has a great deal of personal meaning for me.

Most of the research participants in the sample provided neutral responses to the questions measuring organisational commitment. However, slight tendencies could be differentiated regarding individual items. For instance, 9.4% of the respondents strongly agreed with the statement that they would be very happy to spend the rest of their career with this organisation and as high as 18.3% of respondents strongly disagreed with the same statement (OC1). This indicates issues with the loyalty to the organisation. However, in regards to mild agreement or disagreement with this statement the respondents showed the opposite distribution as 32.3%

of survey participants mildly agreed that they would be happy to spend the rest of their career with the organisation and only 7.6% mildly disagreed. Thus, regarding the intentions of the people to stay with their organisation there are strong opinion on the lack of loyalty and mild opinions on the presence of loyalty, suggesting there are more doubts among the staff whether they will stay with the company in the future.

Much less discrepancy exists in relation to the question whether the research participants felt as if this organisation's problems were their own (OC2). Most of the respondents (33.5%) were neutral about this statement. Around 4.1% of the research participants strongly disagreed with this statement and 9.8% of the respondents strongly agreed with this. Regarding the mild agreement or disagreement with this statement, the differences in the distribution of responses were not substantial.

A large concentration of responses around the neutral point and nearly equal distribution of mild agreement and mild disagreement was observed in relation to the statement that the respondents do not feel a strong sense of belonging to their organisation. This item was reverse coded to check whether the responses would continue to be internally consistent. When looking at the extreme points, more respondents strongly disagreed with this statement (11.4%) than strongly agreed (1.6%).

Two more items in this scale were reverse coded, namely: OC4 and OC5. The former stated that the research participants did not feel emotionally attached to the organisation and the latter stated that they did not feel like part of the family at the organisation. In line with OC3, which was also reverse coded, the research participants showed more strong disagreement with the statements than strong agreements, suggesting that the respondents on average feel as a part of the family and have a sense of belonging in their organisation.

The last item (OC6) stated that "this organisation has a great deal of personal meaning for me". Only 1.8% of the research participants strongly disagreed with this statement whereas 11% showed strong agreement and 11.6% showed general agreement with this. Around 29% of the respondents mildly agreed with this statement. Overall, there is a clear tendency for the respondents to agree that the company has a great deal of personal meaning to them.

# 5.2.1.4. Self-Efficacy Measurement

The construct of self-efficacy, which is used as one of the dependent variables in the study, has been represented using an eight-item scale (SE1-SE8) based on Chen et al. (2001). The distribution of responses ranging from strongly disagree to strongly agree for each of the items is shown in the frequencies table (Table 18).

Table 18 Frequencies Tables for Self-Efficacy

|                    | SE1<br>(Achiev<br>e) | SE2<br>(Accompli<br>sh) | SE3<br>(Obtai<br>n) | SE4<br>(Succee<br>d) | SE5<br>(Overco<br>me) | SE6<br>(Confide<br>nt) | SE7<br>(Compe<br>te) | SE8<br>(Perfor<br>m) |
|--------------------|----------------------|-------------------------|---------------------|----------------------|-----------------------|------------------------|----------------------|----------------------|
| Strongly disagree  | 16.7                 | 2.8                     | 1                   | 1.4                  | 0.6                   | 1.8                    | 0.6                  | 0.8                  |
| Disagree<br>Mildly | 5.2                  | 11                      | 4.8                 | 3.6                  | 4.4                   | 4.2                    | 3.2                  | 3.6                  |
| disagree           | 6                    | 14.3                    | 20.9                | 14.5                 | 11.6                  | 10.2                   | 10.8                 | 9.6                  |
| Neutral            | 10.8                 | 28.1                    | 19.3                | 28.5                 | 21.3                  | 25.7                   | 25.5                 | 21.7                 |
| Mildly agree       | 36.7                 | 16.3                    | 25.9                | 23.5                 | 32.1                  | 25.1                   | 31.7                 | 32.1                 |
| Agree<br>Strongly  | 10.6                 | 14.3                    | 15.1                | 13.3                 | 15.5                  | 16.1                   | 16.3                 | 18.5                 |
| agree              | 13.9                 | 13.3                    | 13.1                | 15.3                 | 14.5                  | 16.9                   | 11.8                 | 13.7                 |
| Total              | 100                  | 100                     | 100                 | 100                  | 100                   | 100                    | 100                  | 100                  |
| Mean               | 4.29                 | 4.35                    | 4.57                | 4.65                 | 4.79                  | 4.79                   | 4.76                 | 4.86                 |
| Std. Dev.          | 1.963                | 1.666                   | 1.530               | 1.506                | 1.448                 | 1.536                  | 1.374                | 1.415                |

Source: Author's original data

#### Notes:

- SE1. I will be able to achieve most of the goals that I have set for myself.
- SE2. When facing difficult tasks, I am certain that I will accomplish them.
- SE3. In general, I think that I can obtain outcomes that are important to me.
- SE4. I believe I can succeed at most any endeavor to which I set my mind.
- SE5. I will be able to successfully overcome many challenges.
- SE6. I am confident that I can perform effectively on many different tasks.
- SE7. Compared to other people, I can do most tasks very well.
- SE8. Even when things are tough, I can perform quite well.

In spite of the overall positive tendency of the responses, the most extreme negative responses were observed in response to statement SE1 that the respondent would be able to achieve most of the goals that they had set for themselves. Around 16.7% of the research participants strongly disagreed with this statement, but the majority (36.7%) showed mild agreement with the statement and some 10.6% agreed and 13.9% of the research participants even strongly agreed with this.

The rest of the items measuring self-efficacy did not show extreme negative values where the respondents would strongly disagree. Moreover, the general tendency for all items was to have most answers concentrated in the region around mildly agree. This suggests that the respondents mostly agreed that when facing difficult tasks, they are certain they would accomplish them (SE2). They also tend to agree that they can obtain outcomes that are important to them (SE3).

The respondents scored positively on self-efficacy measured by their responses to the statement that they believe they can succeed at any endeavour to which they set their mind (SE4). The same applies to their responses to the statement that they can successfully overcome many challenges (SE5). Self-efficacy also measured how confident the research

participants are at performing effectively on many different tasks (SE6). They mostly mildly agreed with this statement but some 16.1% generally agreed and 16.9% strongly agreed with this.

When measuring self-efficacy, they respondents were also asked to compare them to other people and state whether they could do most tasks very well. The majority of the respondents noted that they mildly agreed that they could do most tasks better (31.7%). Around 16.3% of the respondents agreed and 11.8% of the research participants strongly agreed with the statement from SE7.

Lastly, the respondents were found to be able to perform quite well even when things were tough. This is based on their responses to SE8 statements to which they mostly mildly agreed (32.1%), but some even strongly agreed (13.7%).

# 5.2.1.5. Entrepreneurial Orientation Measurement

Entrepreneurial orientation was sub-divided into three categories represented by risk taking, innovativeness and proactiveness (Dai et al., 2014; Kreiser et al., 2013). Risk Taking was measured using a three-item scale based on Covin et al. (2020). The research participants provided quite contrasting results to each of the statements associated with risk taking. It is worth to analyse them in more detail. Table 19 demonstrates the distribution of responses on each of the scale items.

Table 19 Frequencies Table for Risk Taking Measure of Entrepreneurial Orientation

|                   | EO1 (New Ideas) | EO2 (Dealing with Clients) | EO3 (Acting without Permission) |
|-------------------|-----------------|----------------------------|---------------------------------|
| Strongly disagree | 17.3            | 7.8                        | 4.8                             |
| Disagree          | 6.2             | 13.7                       | 8.4                             |
| Mildly disagree   | 7.2             | 19.9                       | 18.7                            |
| Neutral           | 16.5            | 30.3                       | 24.9                            |
| Mildly agree      | 33.3            | 17.1                       | 26.9                            |
| Agree             | 10.8            | 6                          | 10                              |
| Strongly agree    | 8.6             | 5.2                        | 6.2                             |
| Total             | 100             | 100                        | 100                             |
| Mean              | 4.05            | 3.70                       | 4.12                            |
| Std. Dev.         | 1.884           | 1.544                      | 1.522                           |

Source: Author's original data

### Notes:

EO1. I value new plans and ideas, even if I feel that they could fail in practice.

EO2. I sometimes provide assistance to internal clients without first discussing this with my supervisor.

EO3. In order to be more productive, I sometimes act without the permission of my supervisor.

When evaluating the first statement measuring risk taking, which states "I value new plans and ideas, even if I feel that they could fail in practice", the majority of the respondents (33.3%) exhibited mild agreement. However, the second largest group of respondents (17.3%) stated that they strongly disagreed. Thus, this question raised polar views from the research participants. This could indicate strong risk aversion in a significant part of the sample.

In relation to the second statement measuring risk taking (EO2), the majority of the research participants (30.3%) showed neutral results. However, the rest of the respondents revealed a greater tendency to disagree rather than agree with the statement that they sometimes provide assistance to internal clients without first discussing this with their supervisors. This indicates that most respondents do not take uncalculated risks and tend to follow the rules and procedures prevailing at their organisations.

In contrast to the above, the research participants showed more agreement with the statement that in order to be more productive, they sometimes act without the permission of their supervisor. Almost 27% of the sample, which represent the majority group, mildly agreed with this statement. Those who mildly disagreed comprised only 18.7% of the sample. The extreme responses revealed that 4.8% of the research participants strongly disagreed with this and 6.2% strongly agreed.

The next measure of entrepreneurial orientation tested in this research is innovativeness, which has been measured using a three-item scale based on Covin et al. (2020). The frequencies table depicts the distribution of responses for each of these items (Table 20).

Table 20 Frequencies Tables for Innovativeness Measure of Entrepreneurial Orientation

|                   | EO4 (Change) | EO5 (Routine) | EO6 (Creativity) |
|-------------------|--------------|---------------|------------------|
| Strongly disagree | 3.8          | 1.8           | 1.6              |
| Disagree          | 6.4          | 3             | 4                |
| Mildly disagree   | 15.3         | 11.4          | 9.8              |
| Neutral           | 37.3         | 23.5          | 31.3             |
| Mildly agree      | 23.5         | 36.7          | 28.9             |
| Agree             | 9.8          | 12.7          | 12.4             |
| Strongly agree    | 3.8          | 10.8          | 11.8             |
| Total             | 100          | 100           | 100              |
| Mean              | 4.11         | 4.67          | 4.62             |
| Std. Dev.         | 1.363        | 1.392         | 1.419            |

Source: Author's original data

Notes:

- EO4. I have very little problems with renewal and change.
- EO5. I quickly master new routines, procedures and new ways of working.
- EO6. When it comes to problem solving, I always search for creative solutions instead of familiar ones.

In contrast to the risk-taking measures, the innovativeness items show more consistency in the distribution of responses. The respondents who answered "strongly disagree" or "disagree" were the minority. The majority of the research participants were either neutral or mildly agreeing with the statements measuring innovativeness. More specifically, 37.3% of the respondents were neutral in relation to the statement that they had very little problems with renewable and change. At the same time, 23.5% of the research participants mildly agreed with this statement. Somewhat more agreement was demonstrated among respondents regarding EO5, stating that they quickly master new routines, procedures, and new ways of working. Finally, around 28.9% of the respondents mildly agreed with the statement that when it comes to problem solving, they always search for creative solutions instead of familiar ones. At the same time, 31.3% were neutral about this. Only a minority of the respondents disagreed or strongly disagreed with the EO6 statement.

The last measure of entrepreneurial orientation is proactiveness. It has been constructed using a three-item scale (EO7-EO9) based on Covin et al. (2020). The responses to these three statements indicating proactiveness demonstrated mostly consistent results, as evidenced from Table 21.

Table 21 Frequencies Tables for Proactiveness Measure of Entrepreneurship

|                   | EO7 (Finding Customer Needs) | EO8 (Active Help) | EO9 (New Ways) |
|-------------------|------------------------------|-------------------|----------------|
| Strongly disagree | 2                            | 1                 | 0.6            |
| Disagree          | 5.6                          | 4.2               | 3.8            |
| Mildly disagree   | 13.9                         | 13.7              | 11.8           |
| Neutral           | 32.1                         | 32.7              | 22.9           |
| Mildly agree      | 30.7                         | 29.7              | 30.9           |
| Agree             | 10.6                         | 11.2              | 13.5           |
| Strongly agree    | 5                            | 7.4               | 16.5           |
| Total             | 100                          | 100               | 100            |
| Mean              | 4.32                         | 4.45              | 4.81           |
| Std. Dev.         | 1.332                        | 1.324             | 1.461          |

Source: Author's original data

### Notes:

- EO7. I always try to find if (internal) clients have wishes or desires that they are not consciously aware of.
- EO8. I always actively help internal clients, and not only when I am asked or approached to do so.
- EO9. I am constantly looking for new ways to improve my performance at the job.

The majority of the respondents were either neutral (32.1%) or mildly agreeing (30.7% of the sample) with the statement that they always tried to find if clients had wishes or desires that they were not consciously aware of (EO7). Agreement and strong agreement were demonstrated by 10.6% and 5% of the sample, respectively. The share of the research participants who disagreed or strongly disagreed with this was 5.6% and 2%, respectively.

A similar tendency towards agreement was shown by the respondents in relation to the statement that they always actively helped internal clients and not only when they were asked or approached to do so (EO8). This also measures the level of their proactiveness. Only the minority of the research participants disagreed (4.2% of the sample) or strongly disagreed (1% of the sample) with the given statement. Lastly, the research participants also mostly positively responded to the statement that they were constantly looking for new ways to improve their performance at their job (EO9). Some 30.9% of the research participants mildly agreed with this statement, 22.9% remained neutral and only 11.8% mildly disagreed. The shares of those who disagreed or strongly disagreed were even smaller, namely: 3.8% and 0.6%, respectively. At the same time, the shares of those who agreed and strongly agreed were 13.5% and 16.5%, respectively.

# 5.2.1.6. Measurement of Moderating Variables

This study employs four moderating variables. The first moderator, gender, was already presented in Section 4.1. The rest of the moderators are represented by latent variables and therefore their composition and scales are presented here using frequencies tables. The fear of failure, as a moderator, was measured using a five-item scale based on Conroy et al. (2002), and the distribution of responses for each item is shown in Table 22.

Table 22 Frequencies Table for Fear of Failure Measures

|                      | FF1<br>(Worried) | FF2<br>(Afraid) | FF3<br>(Upset) | FF4 (Loss of Interest) | FF5<br>(Disappointed) |
|----------------------|------------------|-----------------|----------------|------------------------|-----------------------|
| Strongly<br>disagree | 20.9             | 9.4             | 9              | 7.8                    | 6.6                   |
| Disagree             | 9.2              | 15.1            | 10.4           | 8.4                    | 7.4                   |
| Mildly disagree      | 12.2             | 19.9            | 20.9           | 15.1                   | 12.4                  |
| Neutral              | 15.5             | 32.9            | 24.3           | 36.7                   | 23.3                  |
| Mildly agree         | 31.5             | 16.3            | 27.7           | 20.1                   | 36.1                  |
| Agree                | 6.4              | 4.2             | 6              | 9.2                    | 9                     |
| Strongly agree       | 4.2              | 2.2             | 1.6            | 2.6                    | 5                     |
| Total                | 100              | 100             | 100            | 100                    | 100                   |

| Mean      | 3.60  | 3.50  | 3.72  | 3.87  | 4.18  |
|-----------|-------|-------|-------|-------|-------|
| Std. Dev. | 1.816 | 1.438 | 1.472 | 1.458 | 1.517 |

Source: Author's original data

#### Note:

FF1. When I am failing, I worry about what others think about me.

FF2. When I am failing, I am afraid that I might not have enough talent.

FF3. When I am failing, it upsets my "plan" for the future.

FF4. When I am not succeeding, people are less interested in me.

FF5. When I am failing, important others are disappointed.

The first item measuring fear of failure is represented by the statement "when I am failing, I worry about what others think about me". This item received the highest number of strong disagreements expressed by 20.9% of the research participants. At the same time, 31.5% of the respondents mildly agreed with this statement suggesting that the presence of fear of failure prevails. It is rather the sample of respondents who do not show homogeneity and differ considerably in whether they worry about what others think or not.

The second item of fear failure did not show such extreme responses as the first item. The second item (FF2) was measured using the statement "When I am failing, I am afraid that I might not have enough talent". Most of the respondents (32.9%) were rather neutral to this statement. However, 16.3% mildly agreed and slightly more respondents, namely: 19.9%, mildly disagreed with this. Overall, the number of those who disagreed, strongly disagreed, or mildly disagreed exceeded those who showed any degree of agreement with the statement. This suggests that the respondents on average do not tend to worry about their talents as the main source of their failure.

Regarding the third item measuring the fear of failure using the statement "When I am failing, it upsets by "plan" for the future", the majority of the respondents (27.7%) mildly agreed, but on average the responses were concentrated around neutral responses with relatively few extremes. For example, 9% of the respondents strongly disagreed with this and only 1.6% strongly agreed.

The research participants did not strongly associate their failure with become less interesting for other people, as evidenced from FF4 item represented by the statement "when I am not succeeding, people are less interested in me". Most of the respondents, namely: 36.7%, were neutral regarding this statement. Those who agreed (8.4%) and disagreed (9.2%) were quite comparable, but the most extreme responses were somewhat in favour of strong disagreement.

The last item measuring the fear of failure was represented by the statement "when I am failing, important others are disappointed". With regards to this statement, most of the research

participants (36.1%) mildly agreed, which suggests that being unwilling to disappoint close people could be one of the triggers of the fear of failing.

Another moderating variable used in this study is well-being, which has been measured on a five-item scale, based on WHO (1998), where each item is represented by a statement with a multiple-choice answer ranging from "at no time" to "all of the time". The frequencies of responses to each of these statements are shown in Table 23.

Table 23 Frequencies Table for Well-Being Measures

|                 | WB1<br>(Cheerful) | WB2<br>(Relaxed) | WB3<br>(Active) | WB4<br>(Fresh) | WB5<br>(Interest) |
|-----------------|-------------------|------------------|-----------------|----------------|-------------------|
| At no time      | 18.7              | 5                | 2.4             | 3.2            | 3.2               |
| Rarely          | 6                 | 13.3             | 6.8             | 6.8            | 5.6               |
| Occasionally    | 4.8               | 18.7             | 24.1            | 11.2           | 11.2              |
| Neutral         | 13.1              | 34.7             | 22.1            | 36.7           | 27.9              |
| Sometimes       | 40                | 14.9             | 26.1            | 23.7           | 34.5              |
| Often           | 8.8               | 7.4              | 12.2            | 12             | 9.8               |
| All of the time | 8.6               | 6                | 6.2             | 6.2            | 7.6               |
| Total           | 100               | 100              | 100             | 100            | 100               |
| Mean            | 4.07              | 3.84             | 4.20            | 4.28           | 4.41              |
| Std. Dev.       | 1.905             | 1.507            | 1.465           | 1.422          | 1.425             |

Source: Author's original data

### Notes:

WB1. I have felt cheerful and in good spirits.

WB2. I have felt calm and relaxed.

WB3. I have felt active and vigorous.

WB4. I woke up feeling fresh and rested.

WB5. My daily life has been filled with things that interest me.

When the research participants evaluated the first statement (WB1) suggesting that they have felt cheerful and in good spirits, the majority (40%) responded "sometimes" but at the same time the second largest group of respondents (18.7%) noted that they have never felt cheerful and in good spirits. While this is a subjective self-assessment, such a large proportion of strong negative responses may indicate that many research participants are either overloaded with work and do not experience joy from what they do or they are in a chronic depression state, which makes them think their whole life lacks cheer.

It is interesting to note that such extreme negative responses are not present in the other four measures of well-being, where the observations are distributed closer to the neutral point. In particular, 34.7% of the research participants stated that they are neutral to the statement that they have felt calm and relaxed (WB2). Around 6% reported that they felt calm and relaxed all of the time and 7.4% said they felt this way often. In contrast, 13.3% mentioned they rarely felt calm and relaxed. Thus, in spite of the dominance of neutral responses, there are more people

who rarely or occasionally felt calm than those who felt this way often or all of the time. This confirms that they could be overloaded with stress and problems that prevents them from being in the calm mode.

Slightly more tendency towards positive responses were observed in relation to the statement that the research participants have felt active and vigorous (WB3). Some 26.1% of the respondents, which represent the majority of the sample, indicated that they have sometimes felt active and vigorous. Those who often felt this way comprised 12.2% of the sample and those who rarely felt active accounted for 6.8% of the research participants. The comparison of WB1, WB2 and WB3 suggests that in order to be active and vigorous, people do not always have to be in a good mood or feel calm and relaxed.

Work overload and stress can be reflected in the amount of healthy sleep they get at night. When people have too much stress, they will find it difficult to wake up feeling fresh and rested. This was asked in question associated with item WB4. The majority of the respondents (36.7%) were neutral to this statement, but the second largest group (23.7%) noted they sometimes felt fresh and rested when they woke up. Similar to WB3, more respondents felt fresh and rested often (12%) than rarely (6.8%).

Lastly, almost 35% of the research participants stated that they sometimes felt that their daily life has been filled with things that interested them (WB5). Overall, those who never or rarely felt this way constitute a minority of the sample, namely: 3.2% and 5.6%, respectively. Thus, the sample is dominated by people who tend to have interest in things around them, but they do not tend to feel calm and relaxed often. In order to pursue their interests, the people have to stay active and vigorous, and this may cause stress sometimes. The presence of significant deviations of responses to WB1 may suggest that there are outliers or emotional and biased responses that some of the research participants provided.

The moderating variable of hyperactivity has been measured using a six-item scale, based on Kessler et al. (2007). The distribution of responses on each of the six items is reported in Table 24.

Table 24 Frequencies Table for Hyperactivity Measures

|                   | HA1<br>(Wrapping<br>Up) | HA2<br>(Order) | HA3<br>(Rememberin<br>g) | HA4<br>(Procrastinati<br>on) | HA5<br>(Fidget) | HA6 (Feel<br>Driven) |
|-------------------|-------------------------|----------------|--------------------------|------------------------------|-----------------|----------------------|
| Never             | 13.7                    | 6.4            | 7.4                      | 8                            | 5.8             | 2.2                  |
| Rarely<br>Occasio | 10.8                    | 12.7           | 12.2                     | 12                           | 8.4             | 5                    |
| nally             | 10                      | 19.5           | 19.7                     | 13.3                         | 14.1            | 14.3                 |
| Neutral<br>Someti | 25.5                    | 34.1           | 26.5                     | 33.7                         | 28.1            | 34.3                 |
| mes               | 31.9                    | 20.1           | 25.9                     | 21.7                         | 31.5            | 28.5                 |

| Often<br>Very | 4.6   | 6.2   | 6.4   | 8.8   | 8.2   | 10.4  |
|---------------|-------|-------|-------|-------|-------|-------|
| Often         | 3.4   | 1     | 1.8   | 2.4   | 3.8   | 5.2   |
| Total         | 100   | 100   | 100   | 100   | 100   | 100   |
| Mean          | 3.75  | 3.68  | 3.74  | 3.81  | 4.07  | 4.30  |
| Std. Dev.     | 1.628 | 1.364 | 1.452 | 1.494 | 1.459 | 1.331 |

Source: original data

#### Note:

HA1. How often do you have trouble wrapping up the final details of a project, once the challenging parts have been done? (reverse-coded)

HA2. How often do you have difficulty getting things in order when you have to do a task that requires organization? (reverse-coded)

HA3. How often do you have problems remembering appointments or obligations? (reverse-coded)

HA4. When you have a task that requires a lot of thought, how often do you avoid or delay getting started? (reverse-coded)

HA5. How often do you fidget or squirm with your hands or feet when you have to sit down for a long time?

HA6. How often do you feel overly active and compelled to do things, like you are driven by a motor?

The research participants have expressed on average mild levels of hyperactivity, which have been evidenced from several questions. For example, when asked how often did they have trouble wrapping up the final details of a project, once the challenging parts had been done (HA1), the majority of the respondents (31.9%) said "sometimes" and those who said "never" or "rarely" constituted 13.7% and 10.8%, respectively, which is much more than those who admitted "often" (4.6%) and "very often" (3.4%). While people have the tendency to choose central or neutral responses when they are not certain, the differences in extreme responses might be most indicative when assessing the moderating effects.

The second question related to the measurement of hyperactivity (HA2) asked the research participants how often did they have difficulty getting things in order when they had to do a task that required organization (Hatak et al., 2021; Stappers and Andries, 2022). The majority of the respondents did not have much difficulties with this as they stated "never" (6.4%), "rarely" (12.7%), "occasionally" (19.5%) or "sometimes" (20.1%). Those who often or very often had these difficulties comprised only 6.2% and 1% of the sample, respectively.

A large part of the research participants (25.9%) sometimes had problems remembering appointments or obligations, but those who said they never (7.4%) or rarely (12.2%) had these problems were more numerous than those who admitted they often (6.4%) or very often (1.8%) had problems remembering appointments or obligations (HA3).

The construct of hyperactivity also measured procrastination of respondents at tasks that required a lot of thought (HA4). While the largest group of respondents were neutral about this statement (33.7%), around 21.7% admitted that they sometimes avoided or delayed the tasks that required a lot of thought. Those who never or rarely did this accounted for 12% and 8%

of the sample, respectively. At the same time, those who often or very often avoided or delayed tasks were fewer, representing only 8.8% and 2.4% of the total sample, respectively.

The fifth item (HA5) measured physical signs of hyperactivity such as when the respondents fidget or squirm with their hands or feet when sitting down for a long time. The majority of the research participants stated that they do this sometimes (31.5%) or occasionally (14.1%). At the same time, those who often or very often felt overly active and compelled to do things (HA6) accounted for only 10.4% and 5.2% of the sample, respectively. The majority of the respondents were either neutral (34.3%) or stated that they sometimes felt overly active and compelled to do things as if they had a motor (28.5%). All six measures of hyperactivity are relatively consistent in their distributions, with similar patterns based on the responses. This confirms that the sample is dominated by people with a mild level of hyperactivity, but some extreme variations are also observed even though they constitute relatively small percentages of the total number of the research participants.

In summary, while this section has focused on the individual items, it has been noticed that they exhibited quite similar patterns suggesting that will be possible to form latent variables that would measure the collective performance of the theoretical constructs. This is done in the dimension reduction section with factor analysis.

### 5.2.2. Dimension Reduction with Factor Analysis

At the core of the dimension reduction procedure is the correlation analysis. Therefore, the bilateral relationships between the discussed variables are now explored using the correlation analysis, after which factor analysis and regression analysis are conducted.

# 5.2.2.1. Correlation Analysis

The Spearman correlation coefficients based on the two-tailed test have been computed for every construct in order to demonstrate the internal reliability and how well these chosen observed variables are matched together to form the given scales. Even though the scales were constructed on previous research that validated them, individual responses may not always be a perfect fit. Correlation analysis is a simple and intuitive way to measure the quality of the scales. If the observed variables that comprise a particular construct have moderately higher and significant correlations, it is very likely that they measure the same theoretical factor. However, if there are strong variations in correlation coefficients between the observed variables for each one of the constructs, the scales might have to be adjusted or there would

be no internal reliability. Since the final decision about the quality of the scale can be made by the range of the correlation coefficients, there is no need to report each pairwise correlation coefficient, and Table 25 demonstrates the minimum and maximum reported values of the Spearman correlations between the items of the theoretical constructs.

Table 25 Range of Spearman's Rank Correlation Coefficients between Items of Theoretical Constructs

| Spearman correlations      | Minimum   | Maximum  |
|----------------------------|-----------|----------|
| Autonomy                   | 0.236***  | 0.637*** |
| Time Availability          | 0.121***  | 0.403*** |
| Management Support         | 0.229***  | 0.437*** |
| Rewards                    | 0.405***  | 0.519*** |
| Entrepreneurial Intentions | 0.354***  | 0.723*** |
| Organisational             |           |          |
| Commitment                 | -0.180*** | 0.577*** |
| Self-Efficacy              | 0.445***  | 0.737*** |
| Risk Taking                | 0.320***  | 0.520*** |
| Innovativeness             | 0.257***  | 0.511*** |
| Proactiveness              | 0.396***  | 0.438*** |
| Fear of Failure            | 0.221***  | 0.579*** |
| Well-Being                 | 0.267***  | 0.563*** |
| Hyperactivity              | 0.119***  | 0.496*** |

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

All correlation coefficients between the measures of autonomy are found to be statistically significant, which means they are different from zero with probability higher that 99% (p<0.01). The highest correlation is observed between CE1 and CE2 (Spearman, CC=0.637, 0<p<0.01), which measure the extent to which the research participants have the freedom to decide what they do on their job (CE1) and whether it is their own responsibility to decide how the job gets done (CE2). The least correlated items in the Autonomy construct are CE4 and CE2 (Spearman, CC=0.236, 0<p<0.01), where CE4 measures the extent to which the research participants felt that they were their own boss and did not have to double-check all of their decisions with someone else. It could be argued that the latter is a more extreme level of autonomy that could be applicable to senior managers and leaders but not general employees. This explains the weaker correlation between these items. This also implies that the scale might have to be adjusted by removing the least correlated items or there would be issues with internal reliability.

The magnitude and range of the correlation coefficients for time availability measures suggest that the monotonic associations between the items of the time availability construct are somewhat weaker compared to the items measuring autonomy. The strongest positive

correlation is observed between CE7 and CE9 (Spearman, CC=0.403, 0<p<0.01). These items measure how often the survey participants find time to get everything done (CE7) and how often they and their co-workers find time for long term problem solving (CE9). These items are positively and monotonically related. At the same time, the lowest correlation coefficient is observed between CE7 and CE8 (Spearman, CC=0.121, 0<p<0.01). The latter measured the extent to which the respondents felt they were always working with time constraints on their job. Job constraints are associated with deadlines that respondents had to meet to successful complete their tasks. However, time constraints may not always imply that they will not have time for other tasks. They rather measure how quickly projects must be completed and whether the deadlines are strict. This explains the relatively weak correlation between these items measuring Time Availability. In order to reduce the data dimension from multiple observed variables to a small number of theoretical constructs they measure, the composition of time availability will also have to be adjusted in order to produce more reliable latent variables.

There is a positive association between the items of management support. The highest correlation is found between CE13 and CE14 (Spearman, CC=0.437, 0<p<0.01). These items measure the extent to which senior managers encourage innovators to bend rules and rigid procedures in order to keep promising ideas on track (CE13) and the extent to which those employees who come up with innovative ideas on their own often receive management encouragement for their activities. At the same time, the weakest correlation is observed between CE12 and CE14 (Spearman, CC=0.229, 0<p<0.01), CE12 measures whether the business unit supports many small and experimental projects realizing that some will undoubtedly fail. Similar to the previously discussed measures of corporate entrepreneurship (Hornsby et al., 2013), there appear to be issues with internal reliability of the scale as this range between the minimum and maximum correlations suggests that some items would have to be removed to develop a more consistent measure of management support.

The range of the correlation coefficients for Rewards items is much narrower compared to the other three constructs comprising the corporate entrepreneurship. In particular, the highest correlation coefficient is found between CE16 and CE17 (Spearman, CC=0.519, 0<p<0.01). They measure the extent to which the supervisor will give special recognition if the respondent's work performance is especially good (CE16) and whether the manager will tell his or her boss if the work was outstanding. However, even the lowest correlation coefficient observed between CE17 and CE18 was moderate (Spearman, CC=0.405, 0<p<0.01). CE18 measured whether the rewards the research participants received were dependent upon their work on the job. The narrow range between the minimum and maximum correlations suggests that the Rewards construct might not have to be adjusted or reduced even further. At the same

time, this narrow range can be explained by the fact that the original scale for Rewards was also comprised of fewer items than the other measures of corporate entrepreneurship.

The entrepreneurial intentions construct shows mostly moderately high corelations between the items. However, some items such as IE1 and IE2 are highly correlated with the correlation coefficient exceeding 0.7. IE1 measures whether the respondents are ready to do anything to be an entrepreneur and EI2 measures whether it is the professional goal of the survey participants to become an entrepreneur. The lowest rank correlation is found between IE1 and IE6 (Spearman, CC=0.354, 0<p<0.01), where IE6 measures the extent to which the survey participants have the firm intention to start a firm someday. While this is the lowest correlation among the items of IE, it still shows moderately positive monotonic association, suggesting that it will be possible to distinguish a single factor on which these items load. However, further tests such as the Cronbach alpha may be needed in order to double-check this and make a decision on whether the scale needs to be adjusted.

While the previous theoretical constructs had only statistically significant rank correlations, the OC construct had some items with correlation coefficients indistinguishable from zero based on the two-tailed test and its significance. For instance, OC1 and OC3 have practically zero correlation. These items measure whether the respondents would be very happy to spend the rest of their career with this organisation (OC1) and whether they feel a strong sense of belonging to the organisation (OC3). Similarly, OC1 is not correlated with OC5 (Spearman, CC=-0.059, p=0.189), which measures whether the research participants feel as a part of the family at their organisations. It is valid to note that the formulation of OC3 and OC5 are very similar, and it is not surprising that OC3 and OC5 share a moderate and statistically significant correlation (Spearman, CC= 0.524, 0<p<0.01). Overall, the data shows that organisational commitment is not likely to be a coherent concept, well-represented by all six items as OC1, OC2 and OC6 show moderate correlation but are not strongly correlated with OC3, OC4 and OC5. The latter three items, however, are moderately intercorrelated, which suggests they may form their own construct. This correlation analysis shows that the OC scale will have to be adjusted before examining how corporate entrepreneurship affects it.

Much more internal consistency is found in the rank correlation between the items measuring the theoretical construct of Self-Efficacy. The items show the highest correlation compared to the other theoretical constructs. For example, the highest observed rank corelation is detected between SE1 and SE2 (Spearman, CC= 0.737, 0<p<0.01), measuring the agreement of the respondents with the statement that they will be able to achieve most of the goals that they have set for themselves (SE1) and their certainty that they will accomplish difficult tasks (SE2). Even the lowest correlation coefficient found between SE1 and SE7 is moderate in terms of its magnitude (Spearman, CC= 0.445, 0<p<0.01). All the estimated rank correlations are

statistically significant. Thus, these correlations show that it is likely that the Self-Efficacy construct will show high internal consistency and there will be no need to adjust the scale by removing the redundant items.

Regarding the linear associations between the observed variables comprising the Risk-Taking construct, all the estimated correlation coefficients are found to be statistically significant, which means they are not equal to zero at the 1% significance level. The signs of all coefficients are positive suggesting there is a significant positive association between the items of Risk Taking. In terms of magnitude, the rank correlation coefficients range from 0.320 for EO1 and EO3 to 0.520 for EO2 and EO3. Thus, positive moderate corelation exists between the provision of assistance to internal clients without first discussing this with the supervisor (EO2) and acting without the permission of the supervisor (EO3). At the same time, a somewhat smaller but still moderate corelation exists between acting without the permission (EO3) and valuing new plans and ideas (EO1). Considering the small number of scale items in Risk-Taking and moderate correlations between all items, it is not expected that the scale would have to be adjusted greatly.

Another indicator of entrepreneurial orientation is represented by Innovativeness, which has been measured using three items, similar to Risk-Taking, but these items demonstrate a wider range of correlation coefficients from 0.257 to 0.511, suggesting there is less internal reliability.

Somewhat higher correlations are demonstrated by the items from the Proactiveness construct which tend to be moderately correlated and the range of correlation coefficients is considerably narrower compared to Innovativeness ranging 0.396 to 0.438. This provides stronger evidence for more internal reliability of the Proactiveness construct compared to the Innovativeness or Risk-Taking.

The moderator variables are also represented by constructs comprised of several items and show similar patterns of distribution of the correlation coefficients between their observed variables. The highest correlation between items comprising the Fear of Failure construct is found between FF1 and FF2, measuring whether the research participants worry about what others think when they are failing (FF1) and whether they are afraid that they might not have enough talent when they are failing (FF2) (Spearman, CC= 0.579, 0<p<0.01). This suggests that the fear of failure is linked to how the respondents assess their confidence in their abilities and talents. The lowest corelation coefficient in this group is observed between FF1 and FF5, with the latter measuring whether the respondents think the important others are disappointed when they are failing (Spearman, CC= 0.221, 0<p<0.01). This indicates mild correlation between the items and this finding suggests that some of the items from the Fear of Failure scale might be redundant and should be removed to preserve internal reliability of the moderating variable.

The Well-Being moderator exhibits relatively similar levels of internal reliability as the Fear of Failure construct based on the range of correlation coefficients between the observed variables comprising the construct. The strongest correlation among the Well Being items is observed between WB1 and WB2 (Spearman, CC= 0.563, 0<p<0.01). They measure whether the research participants have felt cheerful and in good spirits (WB1) and whether they have felt calm and relaxed (WB2). At the same time, items WB2 and WB5 are least correlated in this group (Spearman, CC= 0.267, 0<p<0.01), which suggests that the scale might have to be adjusted by removing the least correlated items.

Some serious issues with internal reliability were found in the correlation analysis of the Hyperactivity construct. All the rank correlation coefficients indicating associations between the items are statistically significant and different from zero. However, they vary substantially in the order of magnitude. While all of them have positive sign, some items are moderately correlated such as the items HA1 and HA2 (Spearman, CC= 0.496, 0<p<0.01), while others are weakly correlated such as the items HA1 and HA6 (Spearman, CC= 0.119, 0<p<0.01), with the latter measuring how often the respondents feel overly active and compelled to do things, like they are driven by a motor (HA6). This suggests that this construct of hyperactivity may not have all items loading well on the extracted common factor and additional adjustments such as item removal may be required. These procedures are done in the following section.

### 5.2.2.2. Cronbach's Alpha Testing and Scale Adjustment

The internal reliability analysis using Cronbach's alpha begins with the CE constructs. Generally, a scale is considered reliable and internally consistent if the value of Cronbach's alpha is greater than 0.7 (Taber, 2018; Adeniran, 2019). The original scale for CE's Time Availability contained five items and showed Cronbach's alpha of 0.623. However, the scale can be improved by removing the least correlated item CE\_Q6, which will result in the increase of Cronbach's alpha from 0.623 to 0.673.

Table 26 Cronbach's Alpha for Time Availability

| Cronbach's Alpha 0.623  | Cronbach's Alpha if Item Deleted |
|-------------------------|----------------------------------|
| CE_Time_Availability_Q1 | 0.498                            |
| CE_Time_Availability_Q2 | 0.549                            |
| CE_Time_Availability_Q3 | 0.601                            |
| CE_Time_Availability_Q4 | 0.519                            |

In contrast to this, another construct for CE represented by Autonomy and measured using a five-item scale based on Hornsby et al. (2013) already shows an acceptable level of reliability with the Cronbach alpha coefficient being 0.765. This suggests that the construct of Autonomy does not require any adjustments.

Table 27 Cronbach's Alpha for Autonomy

| Cronbach's Alpha<br>0.765 | Cronbach's Alpha if Item Deleted |
|---------------------------|----------------------------------|
| CE_Autonomy_Q1            | 0.696                            |
| CE_Autonomy_Q2            | 0.679                            |
| CE_Autonomy_Q3            | 0.706                            |
| CE_Autonomy_Q4            | 0.758                            |
| CE_Autonomy_Q5            | 0.755                            |

Similarly, the original five-item scale used for measuring Management Support also demonstrate high reliability with the Cronbach alpha exceeding the threshold level of 0.7.

Table 28 Cronbach's Alpha for Management Support

| Cronbach's Alpha 0.732   | Cronbach's Alpha if Item Deleted |
|--------------------------|----------------------------------|
| CE_Management_Support_Q1 | 0.706                            |
| CE_Management_Support_Q2 | 0.717                            |
| CE_Management_Support_Q3 | 0.646                            |
| CE_Management_Support_Q4 | 0.673                            |
| CE_Management_Support_Q5 | 0.684                            |

The Rewards construct from CE is comprised of three items and its Cronbach's alpha is even higher compared to the Management Support scale. Furthermore, no substantial improvement to the scale's reliability can be made by removing any of the items.

Table 29 Cronbach's Alpha for Rewards

| Cronbach's Alpha | Cronbach's Alpha if Item Deleted |
|------------------|----------------------------------|
|------------------|----------------------------------|

| 0.772        |       |
|--------------|-------|
| CE_Reward_Q1 | 0.642 |
| CE_Reward_Q2 | 0.681 |
| CE_Reward_Q3 | 0.752 |

Thus, among the four theoretical constructs representing CE, only Time Availability demonstrated slight issues with reliability, but the scale can be improved by removing CE\_Time\_Availability\_Q5 whereas the rest of the items can stay as in the original scale proposed by Hornsby et al. (2013).

The Entrepreneurial Intentions scale based on Liñán and Chen (2009) demonstrates excellent reliability as evidenced by its Cronbach's alpha.

Table 30 Cronbach's Alpha for Entrepreneurial Intentions

| Cronbach's Alpha<br>0.889 | Cronbach's Alpha if Item Deleted |
|---------------------------|----------------------------------|
| EI_Q1                     | 0.884                            |
| EI_Q2                     | 0.858                            |
| EI_Q3                     | 0.862                            |
| EI_Q4                     | 0.865                            |
| EI_Q5                     | 0.869                            |
| EI_Q6                     | 0.879                            |

No adjustments to EI are required. The most serious issue was found with the OC scale. In fact, the correlation analysis in the previous section demonstrated that some of the items from the initial OC scale were poorly correlated. As a result, the Cronbach alpha for the initial set of six items for the OC scale evidences weak reliability.

Table 31 Cronbach's Alpha for Organisational Commitment Variables

| Cronbach's Alpha |       |       | Cronbach's Alpha |  |
|------------------|-------|-------|------------------|--|
| OC_Q1            |       | OC_Q1 |                  |  |
| OC_Q2            |       | OC_Q2 | 0.716            |  |
| OC_Q3            | 0.482 | OC_Q6 |                  |  |
| OC_Q4            |       | OC_Q3 |                  |  |
| OC_Q5            |       | OC_Q4 | 0.835            |  |
| OC_Q6            |       | OC_Q5 |                  |  |

However, if the variables are regrouped, as shown in the table above, they produce two theoretical constructs for OC, each with high internal reliability as indicated by Cronbach's alpha in excess of 0.7. The main implication of this is that similar to the CE construct, which was originally split into Autonomy, Time Availability, Management Support and Rewards, the OC construct should have also been split into two categories. In fact, this discrepancy could have emerged because the original scale for OC based on Meyer et al. (1993) implied reverse-coding for half of the items.

One of the most reliable scales in the study is the one measuring Self-Efficacy, which is proved by its Cronbach's alpha exceeding 0.9.

Table 32 Cronbach's Alpha for Self-Efficacy

| Cronbach's Alpha<br>0.928 | Cronbach's Alpha if Item Deleted |
|---------------------------|----------------------------------|
| SE_Q1                     | 0.927                            |
| SE_Q2                     | 0.912                            |
| SE_Q3                     | 0.917                            |
| SE_Q4                     | 0.917                            |
| SE_Q5                     | 0.914                            |
| SE_Q6                     | 0.917                            |
| SE_Q7                     | 0.924                            |
| SE_Q8                     | 0.923                            |

The scale is based on Chen et al. (2001) and there are no signs that any adjustments to the scale are required, which cannot be said about the EO scale from Covin et al. (2020). The three theoretical constructs are measured by three observed variables and some of these variables are weakly correlated, as evidenced from the previous section. The analysis of Cronbach's alpha shows that only Proactiveness measure demonstrates high reliability with alpha in excess of 0.7.

Table 33 Cronbach's Alpha for Entrepreneurial Orientation

| Cronbach's Alpha<br>0.650 | Cronbach's<br>Alpha if Item<br>Deleted | Cronbach's Alpha<br>0.733 | Cronbach's<br>Alpha if Item<br>Deleted | Cronbach's Alpha 0.673 | Cronbach's<br>Alpha if<br>Item<br>Deleted |
|---------------------------|--|---------------------------|--|------------------------|---|
| EO_Innovation_Q1          | 0.738                                  | EO_Proactiveness_Q1       | 0.665                                  | EO_Risk_Q1             | 0.723                                     |
| EO_Innovation_Q2          | 0.432                                  | EO_Proactiveness_Q2       | 0.600                                  | EO_Risk_Q2             | 0.449                                     |
| EO_Innovation_Q3          | 0.442                                  | EO_Proactiveness_Q3       | 0.675                                  | EO_Risk_Q3             | 0.571                                     |

However, the reliability for Innovation and Risk Taking can be enhanced by removing EO\_Innovation\_Q1 and EO\_Risk\_Q1. In this case, both constructs would yield Cronbach's alphas above 0.7.

Finally, the Cronbach alphas for individual characteristics used as moderating variables in the study, such as Fear of Failure, Wellbeing and Hyperactivity, are all greater than the threshold level of 0.7 reporting high internal reliability. The scale can be improved only slightly by removing IC\_Fear\_Q1 and IC\_Hyperactivity\_Q6.

Table 34 Cronbach's Alpha for Individual Characteristics

| Cronbach's Alpha 0.789    | Cronbach's Alpha if Item Deleted |  |  |
|---------------------------|----------------------------------|--|--|
| IC_Fear_Q1                | 0.791                            |  |  |
| IC_Fear_Q2                | 0.719                            |  |  |
| IC_Fear_Q3                | 0.734                            |  |  |
| IC_Fear_Q4                | 0.737                            |  |  |
| IC_Fear_Q5                | 0.768                            |  |  |
| Cronbach's Alpha<br>0.806 | Cronbach's Alpha if Item Deleted |  |  |
| IC_Wellbeing_Q1           | 0.748                            |  |  |
| IC_Wellbeing_Q2           | 0.767                            |  |  |
| IC_Wellbeing_Q3           | 0.754                            |  |  |
| IC_Wellbeing_Q4           | 0.784                            |  |  |
| IC_Wellbeing_Q5           | 0.786                            |  |  |
| Cronbach's Alpha<br>0.749 | Cronbach's Alpha if Item Deleted |  |  |
| IC_Hyperativity_Q1        | 0.724                            |  |  |
| IC_Hyperativity_Q2        | 0.700                            |  |  |
| IC_Hyperativity_Q3        | 0.697                            |  |  |
| IC_Hyperativity_Q4        | 0.691                            |  |  |
| IC_Hyperativity_Q5        | 0.698                            |  |  |
| IC_Hyperativity_Q6        | 0.762                            |  |  |

Overall, the reliability analysis using Cronbach's alpha has confirmed the quality of the theoretical scales adopted in the study. Except for one measure of CE and reverse coding of

OC, no significant issues with the composition of the original scales were detected. Hence, these variables can be used in the subsequent factor analysis.

## 5.2.2.2. Confirmatory Factor Extraction

The next step after assessing the internal reliability of the constructs is to run confirmatory factor analysis (CFA) to reduce the large number of observed variables to a small number of theoretically justified factors that can be then employed in regression analysis. CFA aims to show how well the factors deduced from theory fit in practice using real data. This contrasts to exploratory factor analysis or principal component analysis, which do not start with theory as a foundation but take all variables together and let the intercorrelations between the variables determine scale compositions. Thus, principal component analysis could be useful in theory development whereas CFA is more useful in theory testing and scale validation. Since the scales of measurement of the theoretical constructs were taken from prior literature, it is important to validate the scales in the specific context in which the relationships between the theoretical factors are tested. For this reason, CFA is a useful tool that has been selected instead of principal component analysis. CFA allows for both validating the scales and computing the latent variables that will represent the theoretical constructs from the conceptual model.

Due to the limitations of SPSS software, CFA was run in R using the Lavaan package and 'cfa' command. The first step was to specify the model. After removing the redundant items revealed in the course of the reliability analysis, the CFA model was specified in R using the following command:

```
CFA.Model <- 'CEAUT =~ CE_Autonomy_Q1 + CE_Autonomy_Q2 + CE_Autonomy_Q3 + CE_Autonomy_Q4 + CE_Autonomy_Q5
CETIME =~ CE_Time_Availability_Q1 + CE_Time_Availability_Q2 + CE_Time_Availability_Q3 + CE_Time_Availability_Q4
CEMS =~ CE_Management_Support_Q1 + CE_Management_Support_Q2 + CE_Management_Support_Q3 + CE_Management_Support_Q4 + CE_Management_Support_Q5
CEREWARD =~ CE_Reward_Q1 + CE_Reward_Q2 + CE_Reward_Q3
EI =~ EI_Q1 + EI_Q2 + EI_Q3 + EI_Q4 + EI_Q5 + EI_Q6
OC1 =~ OC_Q1 + OC_Q2 + OC_Q6
OC2 =~ OC_Q3 + OC_Q4 + OC_Q5
SE =~ SE_Q1 + SE_Q2 + SE_Q3 + SE_Q4 + SE_Q6 + SE_Q7 + SE_Q8
EOINNOV =~ EO_Innovation_Q2 + EO_Innovation_Q3
EORISK =~ EO_Risk_Q2 + EO_Risk_Q3
EOPROACT =~ EO_Proactiveness_Q1 + EO_Proactiveness_Q2 + EO_Proactiveness_Q3
ICFEAR =~ IC_Fear_Q2 + IC_Fear_Q3 + IC_Fear_Q3 + IC_Wellbeing_Q3 + IC_Wellbeing_Q4 + IC_Wellbeing_Q5
ICHYPER =~ IC_Hyperativity_Q1 + IC_Hyperativity_Q2 + IC_Hyperativity_Q3 + IC_Hyperativity_Q4 + IC_Hyperativity_Q5'
```

Where CFA.Model is the name assigned to the CFA model; CEAUT, CETIME, CEMS, CEREWARD, EI, OC1, OC2, SE, EOINNOV, EORISK, EOPROACT, ICFEAR, ICWELL, and ICHYPER are the names of the latent variables that are constructed from the observed variables that are put on the right side of each equation (e.g. CE\_Autonomy\_01, CE\_Autonomy\_02, etc.).

Second, once this model has been created, the following script was run to estimate the coefficients in fit of the CFA model:

CFA.fit <- cfa(CFA.Model, data = df)

Where CFA.Model is the name of the model defined above, cfa is the name of the command used to run the script; CFA.fit is the name of the variable given to the output produced by the model; data = df is the command instructing the software to apply the model to the variables contained in the data frame (df), which was previously imported into R from Excel. The fit of the baseline CFA model is reported in Table 35.

Table 35 CFA Model Summary

| Category                                | Value      |
|---|------------|
| Estimator                               | ML         |
| Optimization method                     | NLMINB     |
| Number of model parameters              | 207        |
| Number of observations                  | 497        |
| Model Test User Model                   |            |
| Test statistic                          | 4255.91    |
| Degrees of freedom                      | 1504       |
| P-value (Chi-square)                    | 0.000      |
| Model Test Baseline Model               |            |
| Test statistic                          | 16783.19   |
| Degrees of freedom                      | 1653       |
| P-value                                 | 0.000      |
| User Model versus Baseline Model        |            |
| Comparative Fit Index (CFI)             | 0.818      |
| Tucker-Lewis Index (TLI)                | 0.800      |
| Loglikelihood and Information Criteria  |            |
| Loglikelihood user model (H0)           | -45297.624 |
| Loglikelihood unrestricted model (H1)   | -43169.669 |
| Akaike (AIC)                            | 91009.248  |
| Bayesian (BIC)                          | 91880.426  |
| Sample-size adjusted Bayesian (SABIC)   | 91223.4    |
| Root Mean Square Error of Approximation |            |
| RMSEA                                   | 0.061      |
| 90 Percent confidence interval - lower  | 0.059      |
| 90 Percent confidence interval - upper  | 0.063      |
| P-value H_0: RMSEA <= 0.050             | 0.000      |
| P-value H_0: RMSEA >= 0.080             | 0.000      |
| Standardized Root Mean Square Residual  |            |

SRMR 0.077

The fit of the measurement model (CFA) is assessed based on the Comparative Fit Index (CFI) and the Tucker-Lewis Index (TLI). Both indices show values in excess of 0.8 whereas a desirable fit should have values close to 0.9 or higher. Thus, the current fit of the baseline CFA is moderate and it could be improved by adjusting the structure of the model. This has been achieved by computing standardised factor loadings from the baseline CFA and removing the observed variables with the smallest factor loadings. Such observed variables have relatively little association with the constructed theoretical construct, which could be due to the scale imperfection and the inability of the previous scales to be perfectly validated in all contexts. The estimated factor loadings for each variable are reported in Table 36.

Table 36 Factor Loadings in Baseline CFA

|                          | CEAUT | CETIME | CEMS  | CEREWA | EI    | OC1   | OC2   | SE    | EOINNO | EORISK | EOPROA | ICFEAR | ICWELL | ICHYPE |
|--------------------------|-------|--------|-------|--------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| CE_Autonomy_Q1           | 0.778 | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| CE_Autonomy_Q2           | 0.823 | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| CE_Autonomy_Q3           | 0.646 | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| CE_Autonomy_Q4           | 0.409 | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| CE_Autonomy_Q5           | 0.441 | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| CE_Time_Availability_Q1  | 0     | 0.738  | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| CE_Time_Availability_Q2  | 0     | 0.566  | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| CE_Time_Availability_Q3  | 0     | 0.406  | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| CE_Time_Availability_Q4  | 0     | 0.653  | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| CE_Management_Support_Q1 | 0     | 0      | 0.553 | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| CE_Management_Support_Q2 | 0     | 0      | 0.462 | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| CE_Management_Support_Q3 | 0     | 0      | 0.666 | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| CE_Management_Support_Q4 | 0     | 0      | 0.699 | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| CE_Management_Support_Q5 | 0     | 0      | 0.596 | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| CE_Reward_Q1             | 0     | 0      | 0     | 0.769  | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| CE_Reward_Q2             | 0     | 0      | 0     | 0.779  | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| CE_Reward_Q3             | 0     | 0      | 0     | 0.643  | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| EI_Q1                    | 0     | 0      | 0     | 0      | 0.74  | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| EI_Q2                    | 0     | 0      | 0     | 0      | 0.826 | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| EI_Q3                    | 0     | 0      | 0     | 0      | 0.81  | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| EI_Q4                    | 0     | 0      | 0     | 0      | 0.781 | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| EI_Q5                    | 0     | 0      | 0     | 0      | 0.741 | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| EI_Q6                    | 0     | 0      | 0     | 0      | 0.675 | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| OC_Q1                    | 0     | 0      | 0     | 0      | 0     | 0.75  | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| OC_Q2                    | 0     | 0      | 0     | 0      | 0     | 0.799 | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| OC_Q6                    | 0     | 0      | 0     | 0      | 0     | 0.527 | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| OC_Q3                    | 0     | 0      | 0     | 0      | 0     | 0     | 0.738 | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| OC_Q4                    | 0     | 0      | 0     | 0      | 0     | 0     | 0.814 | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| OC_Q5                    | 0     | 0      | 0     | 0      | 0     | 0     | 0.828 | 0     | 0      | 0      | 0      | 0      | 0      | 0      |
| SE_Q1                    | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0.757 | 0      | 0      | 0      | 0      | 0      | 0      |
| SE_Q2                    | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0.872 | 0      | 0      | 0      | 0      | 0      | 0      |
| SE_Q3                    | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0.811 | 0      | 0      | 0      | 0      | 0      | 0      |
| SE_Q4                    | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0.814 | 0      | 0      | 0      | 0      | 0      | 0      |
| SE_Q5                    | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0.855 | 0      | 0      | 0      | 0      | 0      | 0      |
| SE_Q6                    | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0.813 | 0      | 0      | 0      | 0      | 0      | 0      |
| SE_Q7                    | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0.702 | 0      | 0      | 0      | 0      | 0      | 0      |
| SE_Q8                    | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0.726 | 0      | 0      | 0      | 0      | 0      | 0      |
| EO_Innovation_Q2         | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0.713  | 0      | 0      | 0      | 0      | 0      |
| EO_Innovation_Q3         | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0.82   | 0      | 0      | 0      | 0      | 0      |
| EO_Risk_Q2               | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0.774  | 0      | 0      | 0      | 0      |
| EO_Risk_Q3               | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0.732  | 0      | 0      | 0      | 0      |
| EO_Proactiveness_Q1      | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0.618  | 0      | 0      | 0      |
| EO_Proactiveness_Q2      | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0.661  | 0      | 0      | 0      |
| EO_Proactiveness_Q3      | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0.774  | 0      | 0      | 0      |
| IC_Fear_Q2               | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0.648  | 0      | 0      |
| IC_Fear_Q3               | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0.732  | 0      | 0      |
| IC_Fear_Q4               | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0.752  | 0      | 0      |
| IC_Fear_Q5               | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0.659  | 0      | 0      |
| IC_Wellbeing_Q1          | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0.835  | 0      |
| IC_Wellbeing_Q2          | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0.666  | 0      |
| IC_Wellbeing_Q3          | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0.71   | 0      |
| IC_Wellbeing_Q4          | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0.544  | 0      |
| IC_Wellbeing_Q5          | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0.573  | 0      |
| IC_Hyperativity_Q1       | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0.546  |
| IC_Hyperativity_Q2       | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0.604  |
| IC_Hyperativity_Q3       | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0.693  |
| IC_Hyperativity_Q4       | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0.683  |
| IC_Hyperativity_Q5       | 0     | 0      | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0.602  |

CFA model has been adjusted by first removing the two items from the CE Autonomy scale, one item from the CE Time Availability scale, and one item from CE Management Support scale that show low factor loadings. Furthermore, it is tested with the CFA whether OC1 or OC2 will demonstrate a higher fit, and the one with the better performance is chosen. Table 37 provides a comparison of the baseline CFA model and the alternative adjusted CFA models in terms of their goodness of fit.

Table 37 Comparison of Adjusted CFA Models

|                       | CFI   | TLI   | RMSEA |
|-----------------------|-------|-------|-------|
| Baseline CFA          | 0.818 | 0.800 | 0.061 |
| Adjusted CFA with OC1 | 0.831 | 0.812 | 0.063 |
| Adjusted CFA with OC2 | 0.842 | 0.824 | 0.061 |
| Adjusted CFA (final)  | 0.898 | 0.880 | 0.055 |

Since the adjusted CFA with OC1 and OC2 provided only marginal improvement of fit, the next observed variables with the lowest factor loadings were removed one at a time until the model could no longer demonstrate an increase in fit. As a result, the final adjusted CFA is specified as follows:

```
CFA.Model4 <- 'CEAUT =~ CE_Autonomy_Q1 + CE_Autonomy_Q2 + CE_Autonomy_Q3

CETIME =~ CE_Time_Availability_Q1 + CE_Time_Availability_Q2 + CE_Time_Availability_Q4

CEMS =~ CE_Management_Support_Q3 + CE_Management_Support_Q4 + CE_Management_Support_Q5

CEREWARD =~ CE_Reward_Q1 + CE_Reward_Q2 + CE_Reward_Q3

EI =~ EI_Q1 + EI_Q2 + EI_Q3

OC =~ OC_Q3 + OC_Q4 + OC_Q5

SE =~ SE_Q1 + SE_Q2 + SE_Q3 + SE_Q4 + SE_Q5

EOINNOV =~ EO_Innovation_Q2 + EO_Innovation_Q3

EORISK =~ EO_Risk_Q2 + EO_Risk_Q3

EOPROACT =~ EO_Proactiveness_Q1 + EO_Proactiveness_Q2 + EO_Proactiveness_Q3

ICFEAR =~ IC_Fear_Q2 + IC_Fear_Q3 + IC_Fear_Q4 + IC_Fear_Q5

ICWELL =~ IC_Wellbeing_Q1 + IC_Wellbeing_Q2 + IC_Wellbeing_Q3

ICHYPER =~ IC_Hyperativity_Q3 + IC_Hyperativity_Q4 + IC_Hyperativity_Q5'
```

In addition to CFI and TLI, the Root Mean Square Error of Approximation (RMSEA) is employed as an additional measure of fit, which demonstrates how different are the model-implied parameters from observed parameters per each degree of freedom. The lower RMSEA the better quality of the measurement model. Traditionally, models are considered to be adequate of their RMSEA do not exceed 0.8 (Atkinson et al., 2011).

In this case, Table 37 shows that the RMSEA of the final CFA is 0.055 compared to 0.061 in the baseline model, which is exhibits the adequate quality of the measurement model. CFI

and TLI have also increased from roughly 0.8 to 0.9 showing a good improvement in the model fit. The estimated parameters of the adjusted CFA model with the highest fit are reported in the next table.

Table 38 Estimated Parameters in CFA

| Latent Variable | Indicator      | Estimate | Std. Err | z-value | P(> z ) | Std.lv | Std.all |
|-----------------|----------------|----------|----------|---------|---------|--------|---------|
| CEAUT           | CE_Autonomy_Q1 | 1        | -        | -       | -       | 1.453  | 0.774   |
| CEAUT           | CE_Autonomy_Q2 | 0.942    | 0.050    | 18.662  | 0.000   | 1.369  | 0.857   |
| CEAUT           | CE_Autonomy_Q3 | 0.622    | 0.045    | 13.753  | 0.000   | 0.904  | 0.631   |
| CETIME          | CE_Tm_Avlbl_Q1 | 1        | -        | -       | -       | 1.034  | 0.756   |
| CETIME          | CE_Tm_Avlbl_Q2 | 0.734    | 0.067    | 11.000  | 0.000   | 0.759  | 0.590   |
| CETIME          | CE_Tm_Avlbl_Q4 | 0.879    | 0.074    | 11.828  | 0.000   | 0.909  | 0.648   |
| CEMS            | CE_Mngmnt_S_Q3 | 1        | -        | -       | -       | 0.902  | 0.647   |
| CEMS            | CE_Mngmnt_S_Q4 | 1.100    | 0.090    | 12.277  | 0.000   | 0.992  | 0.721   |
| CEMS            | CE_Mngmnt_S_Q5 | 0.919    | 0.083    | 11.017  | 0.000   | 0.828  | 0.617   |
| CEREWARD        | CE_Reward_Q1   | 1        | -        | -       | -       | 1.140  | 0.771   |
| CEREWARD        | CE_Reward_Q2   | 0.955    | 0.063    | 15.278  | 0.000   | 1.055  | 0.768   |
| CEREWARD        | CE_Reward_Q3   | 0.836    | 0.063    | 13.345  | 0.000   | 0.923  | 0.654   |
| EI              | EI_Q1          | 1        | -        | -       | -       | 1.627  | 0.869   |
| EI              | EI_Q2          | 0.832    | 0.037    | 22.361  | 0.000   | 1.353  | 0.862   |
| El              | EI_Q3          | 0.648    | 0.036    | 17.870  | 0.000   | 1.054  | 0.719   |
| OC              | OC_Q3          | 1        | -        | -       | -       | 1.059  | 0.733   |
| OC              | OC_Q4          | 1.111    | 0.067    | 16.572  | 0.000   | 1.176  | 0.811   |
| OC              | OC_Q5          | 1.193    | 0.071    | 16.871  | 0.000   | 1.263  | 0.835   |
| SE              | SE_Q1          | 1        | -        | -       | -       | 1.552  | 0.807   |
| SE              | SE_Q2          | 0.931    | 0.039    | 24.077  | 0.000   | 1.445  | 0.896   |
| SE              | SE_Q3          | 0.771    | 0.037    | 21.077  | 0.000   | 1.197  | 0.818   |
| SE              | SE_Q4          | 0.740    | 0.036    | 20.456  | 0.000   | 1.149  | 0.801   |
| SE              | SE_Q5          | 0.724    | 0.034    | 21.168  | 0.000   | 1.123  | 0.820   |
| EOINNOV         | EO_Innovatn_Q2 | 1        | -        | -       | -       | 0.939  | 0.715   |
| EOINNOV         | EO_Innovatn_Q3 | 1.169    | 0.073    | 15.976  | 0.000   | 1.098  | 0.817   |
| EORISK          | EO_Risk_Q2     | 1        | -        | -       | -       | 1.133  | 0.753   |
| EORISK          | EO_Risk_Q3     | 0.976    | 0.080    | 12.220  | 0.000   | 1.106  | 0.752   |
| EOOPRACT        | EO_Prctvnss_Q1 | 1        | -        | -       | -       | 0.789  | 0.64    |
| EOOPRACT        | EO_Prctvnss_Q2 | 1.065    | 0.086    | 12.397  | 0.000   | 0.840  | 0.673   |
| EOOPRACT        | EO_Prctvnss_Q3 | 1.333    | 0.098    | 13.556  | 0.000   | 1.051  | 0.761   |
| ICFEAR          | IC_Fear_Q2     | 1        | -        | -       | -       | 0.902  | 0.644   |
| ICFEAR          | IC_Fear_Q3     | 1.155    | 0.090    | 12.769  | 0.000   | 1.041  | 0.729   |
| ICFEAR          | IC_Fear_Q4     | 1.180    | 0.090    | 13.058  | 0.000   | 1.064  | 0.755   |
| ICFEAR          | IC_Fear_Q5     | 1.070    | 0.090    | 11.907  | 0.000   | 0.964  | 0.661   |
| ICWELL          | IC_Wellbeng_Q1 | 1        | -        | -       | -       | 1.666  | 0.917   |
| ICWELL          | IC_Wellbeng_Q2 | 0.581    | 0.040    | 14.476  | 0.000   | 0.969  | 0.638   |
| ICWELL          | IC_Wellbeng_Q3 | 0.529    | 0.037    | 14.170  | 0.000   | 0.882  | 0.626   |
| ICHYPER         | IC_Hyprtvty_Q3 | 1        | -        | -       | -       | 0.979  | 0.696   |
| ICHYPER         | IC_Hyprtvty_Q4 | 1.098    | 0.086    | 12.791  | 0.000   | 1.075  | 0.742   |
| ICHYPER         | IC_Hyprtvty_Q5 | 0.886    | 0.078    | 11.318  | 0.000   | 0.867  | 0.617   |

The estimated parameters in the CFA are found to be statistically significant. This confirms that the selected and refined items of the theoretical scales used to represent CE, EI, EO, OC, and IC are valid and significantly explain the underlying theoretical factor. The signs of all the estimates are positive suggesting that the observed variables positively load on the underlying factor. In the next chapter, these theoretical factors are extracted from the CFA and are used in hierarchical regressions to measure the associations between the studied constructs.

Starting from this point, the analysis will deal with the latent variables rather than the original raw observed variables.

# Chapter 6: Findings and Regression Analysis

This chapter presents the results of the multiple linear regression analysis performed using the constructed latent variables from the factor analysis. The regression analysis aims to test the hypotheses of the study and measures the statistical significance of the associations between the theoretical constructs.

## 6.1. Normality Tests

The key variables in the regression analysis represented by the extracted factors from CFA have been tested for normality (Table 39).

Table 39 Normality Tests

|          | Kolm      | nogorov-Smirr | nov <sup>a</sup> |           | Shapiro-Wilk |       |
|----------|-----------|---------------|------------------|-----------|--------------|-------|
|          | Statistic | df            | Sig.             | Statistic | df           | Sig.  |
| CEAUT    | 0.083     | 497           | 0.000            | 0.984     | 497          | 0.000 |
| CETIME   | 0.099     | 497           | 0.000            | 0.975     | 497          | 0.000 |
| CEMS     | 0.108     | 497           | 0.000            | 0.960     | 497          | 0.000 |
| CEREWARD | 0.094     | 497           | 0.000            | 0.968     | 497          | 0.000 |
| El       | 0.112     | 497           | 0.000            | 0.971     | 497          | 0.000 |
| OC       | 0.148     | 497           | 0.000            | 0.926     | 497          | 0.000 |
| SE       | 0.105     | 497           | 0.000            | 0.973     | 497          | 0.000 |
| EOINNOV  | 0.076     | 497           | 0.000            | 0.977     | 497          | 0.000 |
| EORISK   | 0.060     | 497           | 0.000            | 0.990     | 497          | 0.002 |
| EOPROACT | 0.079     | 497           | 0.000            | 0.979     | 497          | 0.000 |
| ICFEAR   | 0.129     | 497           | 0.000            | 0.957     | 497          | 0.000 |
| ICWELL   | 0.139     | 497           | 0.000            | 0.953     | 497          | 0.000 |
| ICHYPER  | 0.120     | 497           | 0.000            | 0.961     | 497          | 0.000 |

The data distribution of the dependent variables, including Entrepreneurial Intention (EI), Organizational Commitment (OC), and Self-Efficacy (SE), was explored using the Shapiro-Wilk test and the Kolmogorov-Smirnov test. The null hypothesis of both tests states that the variables are normally distributed. The results of both tests confirm that there is strong evidence to reject the null hypothesis that the data follows a normal distribution, as the outcome of the normality test is significant for all latent variables.

## 6.2. Correlation Analysis

In order to check the bilateral associations between the factors, correlation analysis has been performed as a preliminary step of regression analysis. The output of the correlation analysis is reported in Table 40.

**Table 40 Correlations Matrix** 

|          | CE     | CE    | CE    | CE     | EI    | OC     | SE     | EO     | EO    | EO     | IC     | IC     | IC     |
|----------|--------|-------|-------|--------|-------|--------|--------|--------|-------|--------|--------|--------|--------|
|          | AUT    | TIME  | MS    | REWARD |       |        |        | INNOV  | RISK  | PROACT | FEAR   | WELL   | HYPER  |
| CEAUT    | 1.000  | 0.577 | 0.513 | 0.519  | 0.586 | -0.163 | 0.790  | 0.601  | 0.613 | 0.702  | 0.118  | 0.624  | 0.105  |
| CETIME   | 0.577  | 1.000 | 0.715 | 0.644  | 0.314 | 0.085  | 0.392  | 0.489  | 0.308 | 0.498  | 0.165  | 0.348  | 0.206  |
| CEMS     | 0.513  | 0.715 | 1.000 | 0.815  | 0.411 | 0.208  | 0.336  | 0.396  | 0.342 | 0.446  | 0.350  | 0.298  | 0.271  |
| CEREWARD | 0.519  | 0.644 | 0.815 | 1.000  | 0.274 | 0.043  | 0.376  | 0.444  | 0.271 | 0.444  | 0.192  | 0.309  | 0.163  |
| El       | 0.586  | 0.314 | 0.411 | 0.274  | 1.000 | 0.084  | 0.657  | 0.461  | 0.509 | 0.540  | 0.236  | 0.551  | 0.245  |
| OC       | -0.163 | 0.085 | 0.208 | 0.043  | 0.084 | 1.000  | -0.303 | -0.149 | 0.183 | -0.128 | 0.563  | -0.304 | 0.667  |
| SE       | 0.790  | 0.392 | 0.336 | 0.376  | 0.657 | -0.303 | 1.000  | 0.809  | 0.476 | 0.860  | -0.026 | 0.706  | -0.081 |
| EOINNOV  | 0.601  | 0.489 | 0.396 | 0.444  | 0.461 | -0.149 | 0.809  | 1.000  | 0.476 | 0.960  | -0.001 | 0.505  | -0.084 |
| EORISK   | 0.613  | 0.308 | 0.342 | 0.271  | 0.509 | 0.183  | 0.476  | 0.476  | 1.000 | 0.610  | 0.432  | 0.259  | 0.318  |
| EOPROACT | 0.702  | 0.498 | 0.446 | 0.444  | 0.540 | -0.128 | 0.860  | 0.960  | 0.610 | 1.000  | 0.115  | 0.549  | -0.012 |
| ICFEAR   | 0.118  | 0.165 | 0.350 | 0.192  | 0.236 | 0.563  | -0.026 | -0.001 | 0.432 | 0.115  | 1.000  | -0.201 | 0.745  |
| ICWELL   | 0.624  | 0.348 | 0.298 | 0.309  | 0.551 | -0.304 | 0.706  | 0.505  | 0.259 | 0.549  | -0.201 | 1.000  | -0.132 |
| ICHYPER  | 0.105  | 0.206 | 0.271 | 0.163  | 0.245 | 0.667  | -0.081 | -0.084 | 0.318 | -0.012 | 0.745  | -0.132 | 1.000  |

The correlation analysis explicitly shows that there is a moderate positive correlation between CE-Work Autonomy and EI (r = 0.586), and a relatively high correlation with SE (r = 0.790). The correlation between CE-Work Autonomy and OC is rather weak. This implies that among the three constructs, work autonomy is most strongly associated with higher self-efficacy of employees and entrepreneurial orientation. This can be explained by arguing that greater autonomy means there is less control over the employee, which makes him or her feel themselves more responsible for their decisions and having more power compared to employees who are constantly overlooked by the management and who are constantly corrected if they do something wrong.

Similarly, there is a positive moderate correlation between CE-Time Availability and EI (r = 0.314) and SE (r = 0.392) and almost no correlation with OC (r = 0.085). In contrast to autonomy, time availability has very similar associations with the two constructs of EI and SE suggesting that it is expected to produce approximately the same effect on entrepreneurial intentions and self-efficacy. However, the strength of the effect is expected to be somewhat weaker than in the case of work autonomy, considering the magnitude of correlation coefficients.

Management support has a moderate positive association with self-efficacy (r = 0.336) and the entrepreneurial intentions (r = 0.411). Similar to work autonomy and time availability, the correlation between management support and organisational commitment is weaker compared to the correlations with EI and SE. Thus, the three constructs of corporate entrepreneurship show quite consistent relationships with the three variables of interest, namely EI, OC, and SE.

Table 40 evidences rather weak positive correlation between CE-Reward and OC (r = 0.0.043), and moderate positive correlation with EI (r = 0.274), and SE (r = 0.376), which

suggests that financial incentives and rewards are less effective in stimulating organisational commitment but are positively related with entrepreneurial intentions and self-efficacy.

It is interesting to note that EO components of Risk, Innovation, and Proactiveness have different strengths of associations with EI, OC, and SE constructs. In particular, the EO components of Proactiveness and Innovativeness show the strongest positive correlation with self-efficacy (r = 0.860 and r = 0.809 respectively), suggesting that entrepreneurial orientation of employees evidenced in higher innovativeness and proactive behaviour result in building up their self-efficacy. While the associations with entrepreneurial intentions (Innovativeness: r = 0.461; Risk-Taking: r = 0.509; Proactiveness: r = 0.540) are also positive but the magnitude of the coefficients of correlation is smaller. The associations between EO constructs and organisational commitment is rather weak (Innovativeness: r = -0.149; Risk-Taking: r = 0.183; Proactiveness: r = -0.128).

The analysis of the correlation between individual characteristics of employees and the main dependent variables demonstrates that strong positive association existed between employees' wellbeing and their self-efficacy (r = 0.706). While the correlation analysis allowed for assessing bilateral associations between the variables, this analysis cannot control for all variables at once. Since different variables affect EI, OC and SE at the same time, it is important to control for other variables, and this is done in the next section using regression analysis.

### 6.3. Regression Analysis

The factor scores retrieved from the CFA were used as dependent, independent, mediating and moderating variables in the regression analysis. Since they are standardised with the mean of zero, it was possible to convert the factors for fear of failure, wellbeing and hyperactivity to dummy variables so the moderating effects can be studied. Then, these dummy variables were multiplied by CE factors, namely the measures of autonomy, time availability, rewards and management support. These interaction terms were then added to the regressions to investigate the moderating effects. The coefficients in linear regressions were estimated using the Ordinary Least Squares (OLS) method, and the fit of the regression lines was measured by the coefficient of determination (R-squared), which shows how much of the variance in the dependent variable can be explained by the set of independent variables. The R-squared values along with the number of observations for each regression model are reported in the output. The effects were studied using hierarchical regressions, which means that the baseline model with CE factors as independent variables is estimated first. Then, mediating variables are added, and finally the dummy variables and interaction terms are added to compute the moderating effects.

Overall, the regression models show moderate fit with R-squared ranging from 0.276 to 0.565. This means that the independent variables explain from 27.6% to 56.5% of EI. The highest explanatory power is reported for the second stage OLS regressions that investigate mediation with EO factors dependent variables.

Table 41 provides the output of the regression analysis where the impact of CE, EO and individual characteristics (IC) on EI is explored. IC are comprised of fear of failure, hyperactivity, and well-being. Since testing the mediating effects involves a two-stage regression, EO factors are used as independent variables in the first stage and as dependent variables in the second stage.

Table 41 Multiple Linear Regressions for the Determinants of El

|                   | (1)       | (2)       | (3)       | (4)       | (5)       | (6)       | (7)       | (8)       |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| VARIABLES         | ei        | ei        | eoinnov   | eorisk    | eoproact  | ei        | ei        | ei        |
|                   |           |           |           |           |           |           |           |           |
| age               | -0.0771*  | -0.0689   | -0.0449*  | 0.0328    | -0.0367*  | -0.0597   | -0.0558   | -0.0549   |
|                   | (0.0444)  | (0.0429)  | (0.0255)  | (0.0303)  | (0.0200)  | (0.0423)  | (0.0418)  | (0.0421)  |
| education         | 0.126*    | 0.127*    | 0.00508   | -0.0489   | 7.37e-05  | 0.118*    | 0.150**   | 0.122*    |
|                   | (0.0742)  | (0.0711)  | (0.0427)  | (0.0507)  | (0.0334)  | (0.0711)  | (0.0698)  | (0.0699)  |
| workexp           | 0.101**   | 0.0961**  | 0.0305    | -0.0645** | 0.0202    | 0.0817**  | 0.0630    | 0.0881**  |
|                   | (0.0400)  | (0.0387)  | (0.0230)  | (0.0273)  | (0.0180)  | (0.0386)  | (0.0390)  | (0.0385)  |
| tenure            | -0.0530   | -0.0615*  | 0.0264    | 0.0256    | 0.0249    | -0.0562*  | -0.0577*  | -0.0668** |
|                   | (0.0351)  | (0.0337)  | (0.0202)  | (0.0240)  | (0.0158)  | (0.0335)  | (0.0329)  | (0.0332)  |
| position          | -0.165**  | -0.163**  | -0.00518  | 0.00286   | -0.00399  | -0.140**  | -0.119*   | -0.123*   |
|                   | (0.0672)  | (0.0643)  | (0.0387)  | (0.0459)  | (0.0302)  | (0.0638)  | (0.0639)  | (0.0641)  |
| companysize       | 0.0289    | 0.0135    | 0.0403*   | -0.0162   | 0.0288    | 0.00618   | 0.0123    | 0.00251   |
|                   | (0.0405)  | (0.0389)  | (0.0233)  | (0.0276)  | (0.0182)  | (0.0386)  | (0.0378)  | (0.0385)  |
| companyage        | 0.0303    | 0.0118    | 0.0485*** | 0.00250   | 0.0376**  | 0.0165    | 0.00177   | 0.0306    |
|                   | (0.0324)  | (0.0313)  | (0.0187)  | (0.0222)  | (0.0146)  | (0.0311)  | (0.0310)  | (0.0311)  |
| sector            | -0.0136   | -0.00755  | -0.00844  | 0.0106    | -0.00294  | -0.00952  | -0.0121   | -0.00620  |
|                   | (0.0241)  | (0.0231)  | (0.0139)  | (0.0165)  | (0.0108)  | (0.0229)  | (0.0225)  | (0.0228)  |
| gender            | -0.210*   | -0.168    | -0.0782   | -0.0360   | -0.0553   | -0.139    | -0.114    | -0.133    |
|                   | (0.108)   | (0.104)   | (0.0623)  | (0.0739)  | (0.0486)  | (0.103)   | (0.101)   | (0.102)   |
| ceaut             | 0.691***  | 0.637***  | 0.253***  | 0.564***  | 0.301***  | 0.578***  | 0.738***  | 0.573***  |
|                   | (0.0529)  | (0.0685)  | (0.0305)  | (0.0362)  | (0.0238)  | (0.0845)  | (0.0846)  | (0.0827)  |
| cetime            | -0.342*** | -0.542*** | 0.317***  | -0.197*** | 0.158***  | -0.395*** | -0.752*** | -0.520*** |
|                   | (0.0936)  | (0.0975)  | (0.0539)  | (0.0639)  | (0.0421)  | (0.125)   | (0.141)   | (0.121)   |
| cems              | 1.419***  | 1.647***  | -0.117    | 0.583***  | 0.125*    | 1.369***  | 1.802***  | 1.593***  |
|                   | (0.148)   | (0.162)   | (0.0850)  | (0.101)   | (0.0664)  | (0.211)   | (0.231)   | (0.202)   |
| cereward          | -0.945*** | -1.084*** | 0.0627    | -0.450*** | -0.0975** | -1.031*** | -0.971*** | -1.060*** |
|                   | (0.105)   | (0.114)   | (0.0606)  | (0.0719)  | (0.0473)  | (0.142)   | (0.163)   | (0.137)   |
| eoinnov           |           | 1.408***  |           |           |           | 1.749***  | 1.508***  | 1.612***  |
|                   |           | (0.325)   |           |           |           | (0.338)   | (0.316)   | (0.322)   |
| eorisk            |           | 0.178**   |           |           |           | 0.102     | 0.296***  | 0.0893    |
|                   |           | (0.0810)  |           |           |           | (0.0839)  | (0.0836)  | (0.0840)  |
| eoproact          |           | -1.338*** |           |           |           | -1.637*** | -1.599*** | -1.415*** |
|                   |           | (0.441)   |           |           |           | (0.449)   | (0.432)   | (0.434)   |
| ceaut (indirect)  |           |           | 0.356***  | 0.100**   | -0.403*** |           |           |           |
|                   |           |           | (0.093)   | (0.046)   | (0.137)   |           |           |           |
| cetime (indirect) |           |           | 0.446***  | -0.035*   | -0.211**  |           |           |           |
|                   |           |           | (0.128)   | (0.020)   | (0.090)   |           |           |           |
| cems (indirect)   |           |           | -0.165    | 0.104**   | -0.167    |           |           |           |
|                   |           |           | (0.126)   | (0.051)   | (0.105)   |           |           |           |

| cereward (indirect)       |                   |                   | 0.088 (0.088)     | -0.080**         | 0.130*            |                      |                               |                                |
|---------------------------|-------------------|-------------------|-------------------|------------------|-------------------|----------------------|-------------------------------|--------------------------------|
| fear                      |                   |                   | (0.088)           | (0.039)          | 0.077)            | 0.375***             |                               |                                |
| ceaut_fear                |                   |                   |                   |                  |                   | (0.125)<br>0.229**   |                               |                                |
| cetime_fear               |                   |                   |                   |                  |                   | (0.0937)<br>-0.401** |                               |                                |
| cems_fear                 |                   |                   |                   |                  |                   | (0.179)<br>0.364     |                               |                                |
| cereward_fear             |                   |                   |                   |                  |                   | (0.302)<br>0.0210    |                               |                                |
| wellbeing                 |                   |                   |                   |                  |                   | (0.213)              | 0.474***                      |                                |
| ceaut_wellbeing           |                   |                   |                   |                  |                   |                      | (0.123)<br>-0.368***          |                                |
| cetime_wellbeing          |                   |                   |                   |                  |                   |                      | (0.103)<br>0.433**<br>(0.178) |                                |
| cems_wellbeing            |                   |                   |                   |                  |                   |                      | -0.312<br>(0.282)             |                                |
| cereward_wellbeing        |                   |                   |                   |                  |                   |                      | -0.0883<br>(0.203)            |                                |
| hyperactivity             |                   |                   |                   |                  |                   |                      | (0.203)                       | 0.513***                       |
| ceaut_hyper               |                   |                   |                   |                  |                   |                      |                               | (0.116)<br>0.212**<br>(0.0935) |
| cetime_hyper              |                   |                   |                   |                  |                   |                      |                               | -0.225                         |
| cems_hyper                |                   |                   |                   |                  |                   |                      |                               | (0.177)<br>-0.290<br>(0.301)   |
| cereward_hyper            |                   |                   |                   |                  |                   |                      |                               | 0.259                          |
| Constant                  | -0.246<br>(0.337) | -0.220<br>(0.324) | -0.189<br>(0.194) | 0.317<br>(0.230) | -0.137<br>(0.152) | -0.463<br>(0.340)    | -0.337<br>(0.323)             | (0.222)<br>-0.590*<br>(0.331)  |
| Observations<br>R-squared | 497<br>0.506      | 497<br>0.551      | 497<br>0.491      | 497<br>0.455     | 497<br>0.571      | 497<br>0.568         | 497<br>0.581                  | 497<br>0.574                   |

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The regression analysis reveals that some of the control variables such as work experience, position, age and education have a statistically significant impact on entrepreneurial intentions. For example, younger and more educated employees tend to have higher levels of entrepreneurial intentions compared to older and less educated employees. Interestingly, work experience is significantly and positively associated with EI, which can be explained by noting that as employees gain more work experience, they become more confident in their skills and are ready to experiment and apply their skills to entrepreneurship. However, a similar association is not found between the employee position in the company and EI. Instead, the employees who have reached a high-ranking position tend to be less entrepreneurial.

The findings show that Work Autonomy and Management Support significantly and positively predicted EI (H0). However, Reward and Time Availability showed a significant negative effect on EI among professionals. When considering the Individual Characteristics (IC) as moderators it was found that all three IC, namely wellbeing, hyperactivity, and fear of failure, produced a statistically significant positive effect on EI at the 1% significance level. However,

it was hypothesised initially that only wellbeing and hyperactivity should stimulate EI and positively moderate the effects of CE on EI, whereas fear of failure was expected to produce a negative effect. Thus, the hypothesis of the moderating role of fear of failure is rejected, whereas the hypotheses on the moderating effects of wellbeing and hyperactivity are partially supported. There is only partial support because the statistically significant positive moderation of wellbeing is found only in relation to CE Time Availability and EI, whereas the rest of the CE constructs did not change their effects on EI significantly under the influence of wellbeing. Similarly, the significant moderating effect of hyperactivity is found only in relation to CE Autonomy – EI. These two significant moderating effects are visualised using the following plot.

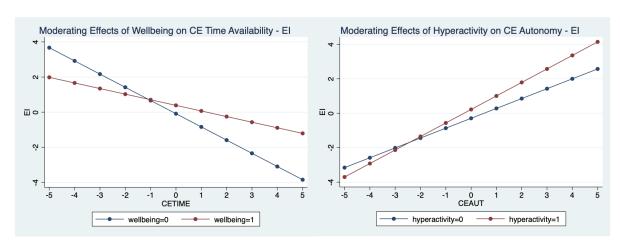


Figure 6 Moderating Effects of Wellbeing and Hyperactivity on CE-EI

The moderating effects were explored using the interaction terms, and the results demonstrate that at higher levels of hyperactivity, the positive relationship between Work Autonomy and EI becomes stronger (H5a). This means that people with different levels of hyperactivity will treat work autonomy differently. More hyperactive employees will see it as an opportunity to pursue their own entrepreneurial intensions whereas people with less hyperactivity will be less inclined to do so. Similarly, at higher levels of wellbeing, the positive effect of CE Time Availability on EI increases. Theoretically, this implies that it is not sufficient for people to have more time available in order to pursue entrepreneurial intentions. If their wellbeing is poor, they will be less likely to use this time to engage in entrepreneurship. This partially confirms the presence of a significant moderation by hyperactivity (H5a) and wellbeing (H4a).

The mediating effects of EO were tested using a two-stage regression where at the first stage, the effects of CE on EI were explored with and without EO. At the second stage, the effects of CE on EO were explored. The findings reveal that only two factors of EO, namely Innovativeness and Risk produced a significant positive effect on EI (H1). At the same time, only two of the CE variables, namely Autonomy and Time Availability, consistently produced

significant positive effects on all three measures of EO. This suggests that there are significant mediating effects, but H1 can be only partially supported. The statistical testing of the mediating indirect effects using Sobel's test along with robustness check is provided in the next sub-section.

Table 42 presents the output of the multiple linear regression analysis examining the impact of CE, IC and EO on OC.

Table 42 Multiple Linear Regression for the Determinants of OC

|                     | (1)       | (2)       | (3)       | (4)       | (5)       | (6)       | (7)       | (8)       |
|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| VARIABLES           | oc        | oc        | eoinnov   | eorisk    | eoproact  | oc        | oc        | oc        |
|                     |           |           |           |           |           |           |           |           |
| age                 | 0.0359    | -0.0116   | -0.0449*  | 0.0328    | -0.0367*  | 0.00541   | -0.0101   | 0.0113    |
|                     | (0.0336)  | (0.0295)  | (0.0255)  | (0.0303)  | (0.0200)  | (0.0263)  | (0.0288)  | (0.0249)  |
| education           | -0.135**  | -0.107**  | 0.00508   | -0.0489   | 7.37e-05  | -0.109**  | -0.0926*  | -0.0905** |
|                     | (0.0563)  | (0.0489)  | (0.0427)  | (0.0507)  | (0.0334)  | (0.0441)  | (0.0479)  | (0.0412)  |
| workexp             | -0.0309   | 0.0214    | 0.0305    | -0.0645** | 0.0202    | -0.0135   | -0.00382  | -0.0203   |
|                     | (0.0303)  | (0.0266)  | (0.0230)  | (0.0273)  | (0.0180)  | (0.0240)  | (0.0268)  | (0.0227)  |
| tenure              | -0.0259   | -0.0225   | 0.0264    | 0.0256    | 0.0249    | -0.00807  | -0.0234   | -0.0202   |
|                     | (0.0266)  | (0.0232)  | (0.0202)  | (0.0240)  | (0.0158)  | (0.0208)  | (0.0226)  | (0.0196)  |
| position            | -0.106**  | -0.111**  | -0.00518  | 0.00286   | -0.00399  | -0.0730*  | -0.0848*  | -0.0354   |
|                     | (0.0510)  | (0.0442)  | (0.0387)  | (0.0459)  | (0.0302)  | (0.0397)  | (0.0439)  | (0.0378)  |
| companysize         | -0.0466   | -0.0204   | 0.0403*   | -0.0162   | 0.0288    | -0.0137   | -0.0162   | -0.0156   |
|                     | (0.0307)  | (0.0267)  | (0.0233)  | (0.0276)  | (0.0182)  | (0.0240)  | (0.0260)  | (0.0227)  |
| companyage          | -0.0376   | -0.0158   | 0.0485*** | 0.00250   | 0.0376**  | -0.000454 | 0.000595  | -0.00383  |
|                     | (0.0246)  | (0.0215)  | (0.0187)  | (0.0222)  | (0.0146)  | (0.0193)  | (0.0213)  | (0.0184)  |
| sector              | 0.00209   | -0.00273  | -0.00844  | 0.0106    | -0.00294  | 0.00111   | -0.00391  | 0.00330   |
|                     | (0.0183)  | (0.0159)  | (0.0139)  | (0.0165)  | (0.0108)  | (0.0142)  | (0.0154)  | (0.0134)  |
| gender              | -0.0419   | -0.0458   | -0.0782   | -0.0360   | -0.0553   | 0.0126    | -0.0324   | 0.000360  |
|                     | (0.0820)  | (0.0712)  | (0.0623)  | (0.0739)  | (0.0486)  | (0.0638)  | (0.0695)  | (0.0604)  |
| ceaut               | -0.208*** | -0.279*** | 0.253***  | 0.564***  | 0.301***  | -0.295*** | -0.185*** | -0.362*** |
|                     | (0.0401)  | (0.0471)  | (0.0305)  | (0.0362)  | (0.0238)  | (0.0525)  | (0.0581)  | (0.0488)  |
| cetime              | -0.0731   | 0.0564    | 0.317***  | -0.197*** | 0.158***  | -0.0136   | 0.0475    | -0.0722   |
|                     | (0.0710)  | (0.0670)  | (0.0539)  | (0.0639)  | (0.0421)  | (0.0777)  | (0.0968)  | (0.0711)  |
| cems                | 1.098***  | 1.033***  | -0.117    | 0.583***  | 0.125*    | 0.683***  | 0.921***  | 0.585***  |
|                     | (0.112)   | (0.111)   | (0.0850)  | (0.101)   | (0.0664)  | (0.131)   | (0.158)   | (0.119)   |
| cereward            | -0.631*** | -0.559*** | 0.0627    | -0.450*** | -0.0975** | -0.364*** | -0.328*** | -0.237*** |
|                     | (0.0798)  | (0.0783)  | (0.0606)  | (0.0719)  | (0.0473)  | (0.0882)  | (0.112)   | (0.0811)  |
| eoinnov             |           | 0.911***  |           |           |           | 1.620***  | 0.917***  | 1.200***  |
|                     |           | (0.224)   |           |           |           | (0.210)   | (0.217)   | (0.190)   |
| eorisk              |           | 0.679***  |           |           |           | 0.520***  | 0.608***  | 0.481***  |
|                     |           | (0.0557)  |           |           |           | (0.0521)  | (0.0574)  | (0.0496)  |
| eoproact            |           | -1.803*** |           |           |           | -2.466*** | -1.723*** | -1.777*** |
|                     |           | (0.303)   |           |           |           | (0.279)   | (0.297)   | (0.256)   |
| ceaut (indirect)    |           |           | 0.230***  | 0.383***  | -0.543*** |           |           |           |
|                     |           |           | (0.063)   | (0.040)   | (0.101)   |           |           |           |
| cetime (indirect)   |           |           | 0.289***  | -0.134*** | -0.285*** |           |           |           |
|                     |           |           | (0.086)   | (0.045)   | (0.090)   |           |           |           |
| cems (indirect)     |           |           | -0.107    | 0.396***  | -0.225*   |           |           |           |
|                     |           |           | (0.082)   | (0.076)   | (0.126)   |           |           |           |
| cereward (indirect) |           |           | 0.057     | -0.306*** | 0.176*    |           |           |           |
|                     |           |           | (0.057)   | (0.055)   | (0.090)   |           |           |           |
| fear                |           |           |           |           |           | 0.789***  |           |           |
|                     |           |           |           |           |           | (0.0779)  |           |           |
| ceaut_fear          |           |           |           |           |           | 0.262***  |           |           |
|                     |           |           |           |           |           | (0.0582)  |           |           |
| cetime_fear         |           |           |           |           |           | 0.0652    |           |           |
|                     |           |           |           |           |           |           |           |           |

| cems_fear                 |              |              |              |              |              | (0.111)<br>0.394** |                       |                      |
|---------------------------|--------------|--------------|--------------|--------------|--------------|--------------------|-----------------------|----------------------|
| cereward_fear             |              |              |              |              |              | (0.187) -0.371***  |                       |                      |
| wellbeing                 |              |              |              |              |              | (0.132)            | -0.302***<br>(0.0843) |                      |
| ceaut_wellbeing           |              |              |              |              |              |                    | -0.0270               |                      |
| cetime_wellbeing          |              |              |              |              |              |                    | (0.0710)<br>-0.0681   |                      |
| cems_wellbeing            |              |              |              |              |              |                    | (0.122)<br>0.137      |                      |
| cereward_wellbeing        |              |              |              |              |              |                    | (0.194)<br>-0.352**   |                      |
| hyperactivity             |              |              |              |              |              |                    | (0.139)               | 0.879***             |
| ceaut_hyper               |              |              |              |              |              |                    |                       | (0.0681)<br>0.267*** |
| cetime_hyper              |              |              |              |              |              |                    |                       | (0.0552)<br>0.101    |
| cems_hyper                |              |              |              |              |              |                    |                       | (0.105)<br>0.454**   |
| cereward_hyper            |              |              |              |              |              |                    |                       | (0.178)<br>-0.420*** |
| Constant                  | 0.999***     | 0.708***     | -0.189       | 0.317        | -0.137       | 0.0949             | 0.847***              | (0.131)<br>-0.0228   |
|                           | (0.256)      | (0.223)      | (0.194)      | (0.230)      | (0.152)      | (0.211)            | (0.222)               | (0.195)              |
| Observations<br>R-squared | 497<br>0.308 | 497<br>0.483 | 497<br>0.491 | 497<br>0.455 | 497<br>0.571 | 497<br>0.594       | 497<br>0.518          | 497<br>0.639         |

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Some of the control variables are found to exhibit a substantial influence on organisational commitment. In particular, less educated respondents demonstrated greater commitment to their organisation and the employees at lower positions showed higher commitment. Other demographic variables, such as age and gender, were not influential.

The findings show that only Management Support significantly and positively predicted OC (H0). However, Reward as well as Work Autonomy produced a significant negative effect on OC among professionals in the baseline model. When the mediating variables were added to the baseline model, the results showed that Innovativeness and Risk Taking were significantly and positively associated with OC. At the same time, Work Autonomy had a significant positive effect on Innovativeness and Risk Taking suggesting that there are significant indirect effects on OC mediated by these EO variables allowing for the partial support of H2. The testing of the statistical significance of the indirect effects using the Sobel test are provided in the next sub-section.

The moderating effects were tested by introducing interaction terms between individual characteristics of wellbeing, fear of failure and hyperactivity and CE variables such as Work Autonomy, Time Availability, Management Support and Rewards. Overall, at least two of the IC variables, namely fear of failure and hyperactivity, report statistically significant positive

effects on OC. However, the significant moderating effects involving these variables are found only in relation to CE Autonomy – OC and CE Management Support – OC nexus. These significant positive moderating effects are illustrated in the following figure.

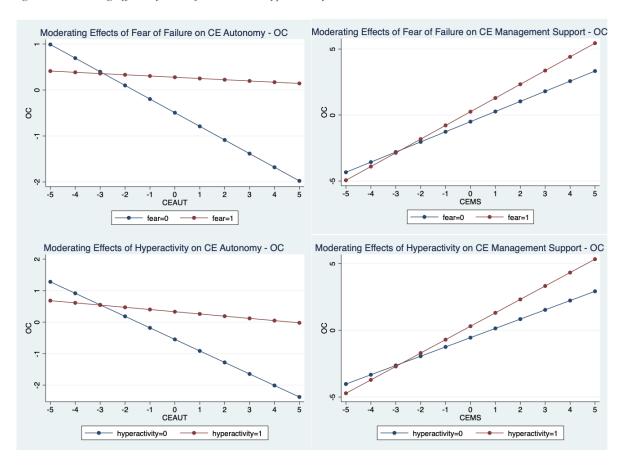


Figure 7 Moderating Effects of Fear of Failure and Hyperactivity on CE-OC

The findings show that Fear of Failure significantly and positively moderates the relationship between Work Autonomy, Management Support and Organisational Commitment. In particular, at higher levels of fear of failure, there is a stronger positive association between Work Autonomy and Organisational Commitment (H6b). Conversely, at lower levels of fear of failure, the relationship between Work Autonomy and Organisational Commitment becomes weaker. Similarly, at higher levels of fear of failure, there is a stronger positive relationship between Management Support and Organisational Commitment. These findings imply that managers should provide more support to insecure employees who need this support more than confident employees. At the same time, the organisation will have more committed employees if it offers them more autonomy at work, especially if these employees are insecure and have a high fear of failure. This will help them relax and gain more confidence leading to greater commitment.

Similar to this, the individual characteristic of hyperactivity demonstrated a significant positive moderating effect indicating that at higher levels of hyperactivity, there is a stronger positive association between Work Autonomy and Organisational Commitment as well as between Management Support and Organisational Commitment (H5b). Theoretically, this means that hyperactive people are more responsive to organisational stimuli and would be more likely to stay with such a company than employees with no hyperactivity. As an implication of this finding, companies should be aware of the situation that creating the CE environment will not equally affect all employees and managers should pay attention to heterogeneous reactions.

Table 43 reports the outcomes of the multiple linear regressions investigating the impact of CE, IC and EO on SE.

Table 43 Multiple Linear Regression for the Determinants of SE

|                     | (1)       | (2)        | (3)       | (4)                 | (5)       | (6)        | (7)        | (8)        |
|---------------------|-----------|------------|-----------|---------------------|-----------|------------|------------|------------|
| VARIABLES           | se        | se         | eoinnov   | eorisk              | eoproact  | se         | se         | se         |
|                     |           |            |           |                     |           |            |            |            |
| age                 | -0.114*** | -0.0318*   | -0.0449*  | 0.0328              | -0.0367*  | -0.0308    | -0.0270    | -0.0314*   |
|                     | (0.0361)  | (0.0188)   | (0.0255)  | (0.0303)            | (0.0200)  | (0.0187)   | (0.0183)   | (0.0189)   |
| education           | 0.0663    | 0.0387     | 0.00508   | -0.0489             | 7.37e-05  | 0.0382     | 0.0489     | 0.0370     |
|                     | (0.0604)  | (0.0311)   | (0.0427)  | (0.0507)            | (0.0334)  | (0.0314)   | (0.0305)   | (0.0313)   |
| workexp             | 0.123***  | 0.0521***  | 0.0305    | -0.0645**           | 0.0202    | 0.0543***  | 0.0381**   | 0.0544***  |
|                     | (0.0326)  | (0.0170)   | (0.0230)  | (0.0273)            | (0.0180)  | (0.0171)   | (0.0170)   | (0.0173)   |
| tenure              | -0.0123   | -0.0410*** | 0.0264    | 0.0256              | 0.0249    | -0.0438*** | -0.0391*** | -0.0427*** |
|                     | (0.0286)  | (0.0147)   | (0.0202)  | (0.0240)            | (0.0158)  | (0.0148)   | (0.0144)   | (0.0149)   |
| position            | -0.0292   | -0.0207    | -0.00518  | 0.00286             | -0.00399  | -0.0179    | -0.00497   | -0.0197    |
|                     | (0.0547)  | (0.0282)   | (0.0387)  | (0.0459)            | (0.0302)  | (0.0282)   | (0.0280)   | (0.0288)   |
| companysize         | 0.0717**  | 0.0125     | 0.0403*   | -0.0162             | 0.0288    | 0.00829    | 0.0120     | 0.0112     |
|                     | (0.0329)  | (0.0170)   | (0.0233)  | (0.0276)            | (0.0182)  | (0.0171)   | (0.0165)   | (0.0173)   |
| companyage          | 0.0893*** | 0.0255*    | 0.0485*** | 0.00250             | 0.0376**  | 0.0240*    | 0.0213     | 0.0284**   |
|                     | (0.0264)  | (0.0137)   | (0.0187)  | (0.0222)            | (0.0146)  | (0.0138)   | (0.0136)   | (0.0140)   |
| sector              | -0.0131   | -0.00186   | -0.00844  | 0.0106              | -0.00294  | -0.00313   | -0.00425   | -0.00163   |
|                     | (0.0196)  | (0.0101)   | (0.0139)  | (0.0165)            | (0.0108)  | (0.0101)   | (0.00982)  | (0.0102)   |
| gender              | -0.137    | -0.0603    | -0.0782   | -0.0360             | -0.0553   | -0.0628    | -0.0361    | -0.0608    |
|                     | (0.0880)  | (0.0454)   | (0.0623)  | (0.0739)            | (0.0486)  | (0.0454)   | (0.0443)   | (0.0459)   |
| ceaut               | 0.846***  | 0.642***   | 0.253***  | 0.564***            | 0.301***  | 0.649***   | 0.688***   | 0.649***   |
|                     | (0.0431)  | (0.0300)   | (0.0305)  | (0.0362)            | (0.0238)  | (0.0374)   | (0.0370)   | (0.0371)   |
| cetime              | -0.0320   | -0.420***  | 0.317***  | -0.197***           | 0.158***  | -0.351***  | -0.541***  | -0.421***  |
|                     | (0.0761)  | (0.0427)   | (0.0539)  | (0.0639)            | (0.0421)  | (0.0554)   | (0.0616)   | (0.0541)   |
| cems                | -0.244**  | -0.125*    | -0.117    | 0.583***            | 0.125*    | -0.188**   | -0.0569    | -0.0825    |
|                     | (0.120)   | (0.0707)   | (0.0850)  | (0.101)             | (0.0664)  | (0.0932)   | (0.101)    | (0.0907)   |
| cereward            | 0.0576    | -0.0311    | 0.0627    | -0.450***           | -0.0975** | -0.0605    | 0.0209     | -0.0539    |
|                     | (0.0856)  | (0.0499)   | (0.0606)  | (0.0719)            | (0.0473)  | (0.0628)   | (0.0711)   | (0.0617)   |
| eoinnov             |           | 0.0406     |           |                     |           | 0.0342     | 0.0793     | 0.0478     |
|                     |           | (0.142)    |           |                     |           | (0.150)    | (0.138)    | (0.144)    |
| eorisk              |           | -0.557***  |           |                     |           | -0.558***  | -0.501***  | -0.553***  |
|                     |           | (0.0355)   |           |                     |           | (0.0371)   | (0.0365)   | (0.0377)   |
| eoproact            |           | 1.685***   |           |                     |           | 1.695***   | 1.577***   | 1.668***   |
| . (' 1' )           |           | (0.193)    | 0.010     | 0.214***            | 0.507***  | (0.199)    | (0.189)    | (0.195)    |
| ceaut (indirect)    |           |            | 0.010     | -0.314***           | 0.507***  |            |            |            |
| t ( 1 t )           |           |            | (0.036)   | (0.028)             | (0.028)   |            |            |            |
| cetime (indirect)   |           |            | 0.013     | 0.110***            | 0.266***  |            |            |            |
| (' 1' A)            |           |            | (0.045)   | (0.036)             | (0.077)   |            |            |            |
| cems (indirect)     |           |            | -0.005    | -0.325***           | 0.211*    |            |            |            |
|                     |           |            | (0.017)   | (0.060)<br>0.251*** | (0.114)   |            |            |            |
| cereward (indirect) |           |            | 0.003     |                     | -0.164**  |            |            |            |
|                     |           |            | (0.009)   | (0.043)             | (0.082)   |            |            |            |

| fear               |          |         |         |         |         | -0.000568            |                      |                      |
|--------------------|----------|---------|---------|---------|---------|----------------------|----------------------|----------------------|
| ceaut_fear         |          |         |         |         |         | (0.0555)<br>-0.0107  |                      |                      |
| cetime fear        |          |         |         |         |         | (0.0414)<br>-0.171** |                      |                      |
| cems fear          |          |         |         |         |         | (0.0790)<br>0.125    |                      |                      |
| _                  |          |         |         |         |         | (0.133)              |                      |                      |
| cereward_fear      |          |         |         |         |         | 0.0982<br>(0.0941)   |                      |                      |
| wellbeing          |          |         |         |         |         |                      | 0.209***<br>(0.0537) |                      |
| ceaut_wellbeing    |          |         |         |         |         |                      | -0.173***            |                      |
| cetime_wellbeing   |          |         |         |         |         |                      | (0.0452)<br>0.245*** |                      |
| cems wellbeing     |          |         |         |         |         |                      | (0.0779)<br>-0.132   |                      |
|                    |          |         |         |         |         |                      | (0.123)              |                      |
| cereward_wellbeing |          |         |         |         |         |                      | -0.0440<br>(0.0887)  |                      |
| hyperactivity      |          |         |         |         |         |                      | (*****)              | 0.0193               |
| ceaut_hyper        |          |         |         |         |         |                      |                      | (0.0518)<br>-0.00844 |
| cetime hyper       |          |         |         |         |         |                      |                      | (0.0419)<br>-0.0113  |
|                    |          |         |         |         |         |                      |                      | (0.0795)             |
| cems_hyper         |          |         |         |         |         |                      |                      | -0.105<br>(0.135)    |
| cereward_hyper     |          |         |         |         |         |                      |                      | 0.0637               |
| Constant           | -0.595** | -0.179  | -0.189  | 0.317   | -0.137  | -0.177               | -0.229               | (0.0997)<br>-0.190   |
|                    | (0.274)  | (0.142) | (0.194) | (0.230) | (0.152) | (0.150)              | (0.141)              | (0.148)              |
| Observations       | 497      | 497     | 497     | 497     | 497     | 497                  | 497                  | 497                  |
| R-squared          | 0.660    | 0.910   | 0.491   | 0.455   | 0.571   | 0.912                | 0.917                | 0.911                |

Standard errors in parentheses
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Among control variables, age is found to produce a significant negative effect on SE in the baseline model, suggesting that younger respondents tend to exhibit higher levels of self-efficacy. Higher SE is also observed among the respondents with more work experience, and in larger and more mature companies.

Based on the reported results, only Work Autonomy significantly and positively predicted SE (H0). At the same time, the effect of Management Support on SE among professionals was found to be negative. This can be explained by arguing that employees may perceive management support as an indication that they do not or cannot do their job properly without supervision. This naturally could lead to lower SE.

Another CE measure, namely: time availability, produced only indirect effects on SE mediated by Proactiveness (H3). The statistical significance of the indirect effects is measured based on Sobel's test and discussed in the subsequent section. In contrast to the previous models, the moderating effects of individual characteristics are less prominent. In particular, hyperactivity has no moderating effects at all (H5c). Similarly, there is no statistically significant moderating effect of the fear of failure that would be consistent with initial expectations. The only individual characteristic that produced a significant positive effect on SE is wellbeing.

Wellbeing has also shown a statistically significant positive moderating effect on the relationship between CE Time Availability and SE. This is visualised in the following figure.

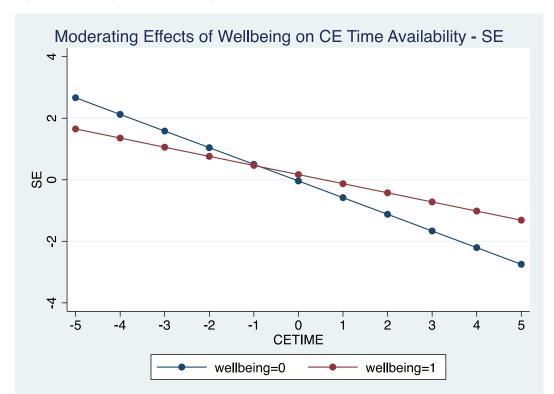


Figure 8 Moderating Effects of Wellbeing on CE-SE

At higher levels of wellbeing, there is a stronger association between CE Time Availability and SE. This means that wellbeing is an essential condition for employees to exhibit self-efficacy. When such employees are given more time, they feel more energy and confidence in the ability to complete their projects with high quality. When the suffer from deteriorating wellbeing, more time available could make them prone to overthinking their problems and as a result make them more insecure with less self-efficacy.

This study has confirmed that greater autonomy at work positively contributes to self-efficacy of employees in Abu Dhabi. Greater work autonomy offered to employees was a positive driver for their self-efficacy, building up their confidence. This finding agrees with Çetin and Aşkun (2018) who identified a positive relationship between job autonomy and self-efficacy of employees in their workplace. Similarly, the results appear to be in line with Dedahanov et al. (2019) who found that job autonomy improved self-efficacy among employees in the company, even though the findings were made in a different context of South Korea. Identical evidence was attained by Bargsted et al. (2019) in the context of Chile, which is also consistent with the findings from the thesis.

At the same time, this research has shown that rewards had no significant positive effect on SE, which contrasts a number of previous studies such as Singh et al. (2019), Na-Nan et al. (2021) and Nguyen and Malik (2020) who observed that rewards and recognition boosted self-efficacy of employees. However, it is valid to note that in line with this study, the absence of a significant impact of rewards on self-efficacy of employees was also previously detected by Park and Yang (2019).

The evidence from this research has shown that more time available to employees only indirectly and positively contributes to their self-efficacy in Abu Dhabi. This indirect effect is mediated by Proactiveness, an EO factor. Having more time availability is understood as both having a better work-life balance and having less pressure from deadlines for projects. The latter perception of time availability is based on Li et al. (2022) who proposed that giving more control to employees to manage their schedule in a more flexible way can help reduce the time pressure they felt. Li et al. (2022) also argued that less time pressure and more time availability in the workplace positively affected self-efficacy of the staff. The findings from this thesis also agree with Rodríguez-Sánchez et al. (2020) as both this thesis and their study showed indirect effects of time availability on self-efficacy.

### 6.4. Sobel's Test and Robustness Checks

The regression analysis from the previous section demonstrated the statistical significance of the direct and moderating effects as well as the computation of indirect effects in the two-stage process. This section provides the assessment of the statistical significance of the computed indirect or mediating effects using the Sobel test and provides further robustness checks by rerunning the regression analysis with a sub-sample of employees with work experience greater than 1 year.

The indirect effects have been computed by multiplying the slope coefficients for the regressors in the models where EO variables were used as dependent variables by the slope coefficients of the mediating variables, namely: the EO variables, when they were used as regressors in the models with EI, OC, and SE as dependent variables. Table 44 reports these indirect effects and their respective standard errors.

Table 44 Sobel's Test for Indirect Effects

|  | Indirect Effect | Standard Error | Sobel's Test | p-value |
|--|-----------------|----------------|--------------|---------|
| CE Autonomy -> EO Innovativeness -> EI | 0.356           | 0.093          | 3.839***     | 0.000   |
| CE Autonomy -> EO Risk-> EI            | 0.100           | 0.046          | 2.175**      | 0.030   |
| CE Management Support -> EO Risk-> EI  | 0.104           | 0.051          | 2.053**      | 0.040   |
| CE Autonomy -> EO Innovativeness -> OC | 0.230           | 0.063          | 3.659***     | 0.000   |
| CE Autonomy -> EO Risk-> OC            | 0.383           | 0.040          | 9.605***     | 0.000   |
| CE Time -> EO Innovativeness -> OC     | 0.289           | 0.086          | 3.351***     | 0.001   |

| CE Management Support -> EO Risk-> OC | 0.396                   | 0.076 | 5.222*** | 0.000 |
|---------------------------------------|-------------------------|-------|----------|-------|
| CE Autonomy -> EO Proactiveness -> SE | 0.507                   | 0.071 | 7.181*** | 0.000 |
| *** n                                 | <0.01 ** p<0.05 * p<0.1 |       |          |       |

The Sobel test is computed by dividing the produce of the slope coefficients from the first and second stage regression, i.e. the indirect effect, by the standard error of this effect:

$$Z = \frac{ab}{\sqrt{b^2 S E_a^2 + a^2 S E_b^2}}$$

Where a and b are the slope coefficients from the first and second stage of the mediating effect regressions; SE is the standard error.

The value of the Sobel test is compared to the critical values of the standard normal variable and the p-value is computed based on the two-tailed test with cumulative distribution function (CDF):

$$p = 2(1 - \Phi(|Z|))$$

Where  $\Phi(|Z|)$  is the CDF of the Sobel Z-score.

The results report that there is a statistically significant positive indirect effect of CE Autonomy on EI channelled through Innovativeness and Risk-Taking. These represent only partial mediation because, when controlling for the mediator, CE Autonomy also retains its significant positive direct effect on EI. At the same time, the positive indirect effect of time availability on EI is mediated significantly by Innovativeness, and it contrasts to the direct negative effect of CE time availability on EI. As a result, this also demonstrates partial mediation. The discrepancy between the signs of the direct and indirect effects can be explained by the argument that with more time available, employees want to be more innovative, and innovativeness does translate into EI. However, with more time available in the workplace, the employee will not be willing to change this to pursue entrepreneurship that can end up consuming more time.

The positive indirect effects of CE Management Support on EI are significantly mediated by risk-taking, and this also represents only partial mediation because the direct positive effect of CE Management Support on EI is maintained even after including the mediator in the regression. Thus, it is possible to conclude that different constructs of corporate entrepreneurship have positive indirect effects on EI, but they are not mediated equally by the same channels and to the same degree. This allows for partially supporting H1.

CE Autonomy has a significant positive indirect effect on OC channelled through innovativeness and risk-taking, whereas the direct effect of CE Autonomy on OC is negative. This represents partial mediation, and the discrepancy between the signs of the direct and

indirect effects is explained as follows. Given more autonomy in the workplace, employees have more time to take risks and innovate. However, such autonomy could also be accompanied by less communication and lower feeling of belonging to the organisation, which may result in direct negative effects on commitment, while there are positive indirect effects through risk-taking and innovativeness.

CE Time Availability significantly and positively affects OC indirectly through innovativeness. This is an example of full mediation because the direct effect of CE Time Availability on OC is not statistically significant. CE Management Support has a statistically significant positive indirect impact on OC mediated by risk-taking. This is partial mediation, as CE Management also has a significant positive direct effect on OC. These findings allow for partially supporting H2, as different constructs of CE can indirectly affect OC even though the effects could be channelled through different EO variables, but not all of these effects are positive.

Somewhat different mediating effects are observed in the relationship between CE and SE. the positive indirect impact of CE Autonomy on SE is significantly mediated through EO Proactiveness, but not the other two constructs of EO. Furthermore, since the direct effect of CE Autonomy on SE persists even after accounting for mediation by EO Proactiveness, it is possible to conclude that there is only partial mediation provided by this EO variable. This allows for partial support of H3. The rest of the indirect effects on SE were insignificant.

The robustness checks have been performed by rerunning all regressions on a sub-sample of employees that had more than one year of work experience. The results of the robustness test are reported in Appendices I, J, and K. The main differences between the results estimated for the full sample and the results in the robustness check are the following. The slope coefficient for CE Management Support affecting one of the mediators (EO Proactiveness) improved its statistical significance from 10% to 5%. Also, the moderating effect of Fear of Failure on the association between CE Management Support and EI has become statistically significant at the 10% level, whereas in the original model it was not significant. Nevertheless, these are minor differences, and most of the key results are found to be similar, which allows for concluding that the results are robust.

## 6.5. Summary of Findings

In summary, the analysis of the findings from Chapter 6 allowed for partially supporting 9 out of 12 hypotheses set for the testing (Table 45).

Table 45 Summary of Research Hypotheses

| Hypotheses   | Decision               |
|--|------------------------|
| Direct effects of CE environment on EI, OC and SE:   |                        |
| H0: There are significant positive effects of CE on EI, OC and SE                          | Partially<br>Supported |
| Mediating effects of EO:   |                        |
| H1: Entrepreneurial orientation mediates the positive effect of corporate                  | Partially              |
| entrepreneurship on the entrepreneurial intentions of employees in Abu Dhabi;              | Supported              |
| H2: Entrepreneurial orientation mediates the positive effect of corporate                  | Partially              |
| entrepreneurship on the organisational commitment of employees in Abu Dhabi;               | Supported              |
| H3: Entrepreneurial orientation mediates the positive effect of corporate                  | Partially              |
| entrepreneurship on the self-efficacy of employees in Abu Dhabi.                           | Supported              |
| Moderating effects of Well-Being:  |                        |
| H4a: At higher levels of well-being, there is a stronger positive effect of corporate      | Partially              |
| entrepreneurship on the entrepreneurial intentions of employees in Abu Dhabi;              | Supported              |
| H4b: At higher levels of well-being, there is a stronger positive effect of corporate      | Rejected               |
| entrepreneurship on the organisational commitment of employees in Abu Dhabi;               | _                      |
| H4c: At higher levels of well-being, there is a stronger positive effect of corporate      | Partially              |
| entrepreneurship on the self-efficacy of employees in Abu Dhabi;                           | Supported              |
| Moderating effects of Hyperactivity:   |                        |
| H5a: At higher levels of hyperactivity, there is a stronger positive effect of corporate   | Partially              |
| entrepreneurship on the entrepreneurial intentions of employees in Abu Dhabi;              | Supported              |
| H5b: At higher levels of hyperactivity, there is a stronger positive effect of corporate   | Partially              |
| entrepreneurship on the organisational commitment of employees in Abu Dhabi;               | Supported              |
| H5c: At lower levels of hyperactivity, there is a stronger positive effect of corporate    | Rejected               |
| entrepreneurship on the self-efficacy of employees in Abu Dhabi.                           |                        |
| Moderating effects of Fear of Failure:   |                        |
| H6a: At higher levels of fear of failure, there is a weaker positive effect of corporate   | Partially              |
| entrepreneurship on the entrepreneurial intentions of employees in Abu Dhabi;              | Supported              |
| H6b: At higher levels of fear of failure, there is a stronger positive effect of corporate | Partially              |
| entrepreneurship on the organisational commitment of employees in Abu Dhabi;               | Supported              |
| H6c: At higher levels of fear of failure, there is a weak positive effect of corporate     | Rejected               |
| entrepreneurship on the self-efficacy of employees in Abu Dhabi.                           |                        |

This partial support was expected, as each of the theoretical constructs presented in the hypotheses was comprised of several other latent variables, and it is very unlikely that they would all jointly affect the predicted variables significantly.

The main purpose of this chapter was to assess the effects of corporate entrepreneurship (CE) on entrepreneurial intentions (EI), self-efficacy (SE), and organisational commitment (OC) of private sector professionals in Abu Dhabi. This aim has been achieved by implementing the method of multiple linear regression analysis to a sample of respondents from Abu Dhabi. Corporate entrepreneurship has been represented by four categories, namely: management support, autonomy, time availability and rewards and reinforcement. Each of these theoretical constructs was measured using validated scales examined through the approach based on Cronbach's alpha. The first objective of this study was to examine the direct effects of CE on EI, SE, and OC of employees in Abu Dhabi. After achieving dimension

reduction through the CFA analysis with Cronbach's alpha, this objective has been attained by running multiple linear regressions where each of the four constructs comprising CE was regressed on EI, OC, and SE. The results revealed that only Work Autonomy and Management Support had a statistically significant positive impact on entrepreneurial intentions of employees. Thus, higher work autonomy provided to employees was positively reflected in their entrepreneurial intentions. Similarly, management support also played a positive role in nurturing entrepreneurial intentions in employees.

Somewhat similar evidence has been attained for the impact of CE on the organisational commitment. Out of the four constructs of CE, only management support played a significant direct positive role in stimulating organisational commitment. The more the staff feel supported, the more loyal and committed they are to the organisation. Having more autonomy in the workplace does not seem to make employees more committed to their organisations.

The analysis of the direct effects of the four constructs of corporate entrepreneurship on selfefficacy has shown that only work autonomy was a statistically significant positive antecedent of SE.

The second objective of this thesis was to estimate the indirect effects of corporate entrepreneurship mediated through entrepreneurial orientation on the organisational commitment, self-efficacy and entrepreneurial intentions of employees in Abu Dhabi. The results have demonstrated that entrepreneurial orientation was a statistically significant mediator in all three multiple linear regression models producing a positive effect on the organisational commitment, self-efficacy and entrepreneurial intentions. However, the mediating hypotheses were not fully accepted, but only partially supported, because it was impossible for absolutely all components of EO to be significant positive mediators transmitting the effects from each component of CE to EI, OC, and SE. The mediating effects were detected by running a two-stage OLS regression where EO variables were regressed on CE variables and then EI, OC and SE were regressed on both CE and EO. The indirect effects were then computed by multiplying the slope coefficients from the first-stage regression by respective slope coefficients from the second-stage regression and running Sobel's test to examine the statistical significance of the mediation. If CE has significant effects on EI, OC and SE but not on EO, there are only direct effects. If CE has significant effects on EI, OC, SE and EO, and at the same time, EO has significant effects on EI, OC and SE, there are partial mediating effects. Finally, if CE has no significant effects on EI, OC and SE but it has a significant effect on EO, which significantly affects EI, OC and SE, there are pure indirect effects.

The third objective of this thesis is to assess how the factors of well-being, fear of failure, and hyperactivity moderate the effect of corporate entrepreneurship on the organisational

commitment, self-efficacy and entrepreneurial intentions of employees in Abu Dhabi. Regarding entrepreneurial intentions, the findings have shown that all three IC variables, namely fear of failure, wellbeing, and hyperactivity, produced a significant moderating effect on the relationship between CE and El. However, the moderation did not apply to all constituents of CE, which suggests only partial support of the moderating hypotheses. In particular, at higher levels of fear of failure, lower effects of CE Time on El were observed, but this did not apply to other CE variables. At the same time, at higher levels of hyperactivity, a higher impact of CE Autonomy on El was observed. Wellbeing positively and significantly moderated the association between CE Time Availability and El.

Regarding the effects on organisational commitment, out of the three individual characteristics only two moderators, namely fear of failure and hyperactivity, were found to be statistically significant. The employees who had higher fear of failure and higher hyperactivity demonstrated stronger associations between CE Autonomy, Management Support, and OC. At the same time, the employees with higher levels of wellbeing demonstrated no differences in the relationships between CE and organisational commitment.

Finally, the evidence from this research shows that there are no significant moderating effects of individual characteristics such as fear of failure and hyperactivity on the relationship between CE and self-efficacy. The only significant moderator is wellbeing. At higher levels of wellbeing, the effect of CE Time Availability on SE improved. These results have practical and theoretical implications that are discussed in the following chapter.

## Chapter 7: Discussion and Conclusion

This chapter has a purpose to link the previous research and theory discussed in the literature review with the original findings and evidence attained in Chapter 6. The discussion is focused on each research hypothesis, and final conclusions are formulated in relation to the original research aims and objectives. The chapter also provides implications for practice and highlights theoretical contributions, followed by the discussion of limitations of the study and subsequent recommendations for future research.

### 7.1. Discussion

The main contributions of this thesis lie in the extension of previous research, which focused predominantly on direct effects between the constructs, and in evidencing the complexity of the relationship with mediating and moderating factors that previously were not considered in this role.

### 7.1.1. Discussion of Direct Effects

The results of testing the direct effects of the CE environment on EI have confirmed the previous evidence discussed in literature review that management support is positively related to entrepreneurial intentions of employees. The findings of the significant positive role of management support in predicting El of employees is consistent with other empirical studies such as Muralidharan and Pathak (2018) who observed that leadership was one of the key determinants of entrepreneurial intentions in companies. In particular, they noted that a particular type of leadership known as transformational leadership is associated with the more supportive environment for employees, which stimulates their entrepreneurial intentions. The evidence, is also in line with the previous quantitative research conducted by Baskaran (2018). The latter argued that management support drove innovation which in turn was associated with greater entrepreneurial intentions, and this is in agreement with the findings from this thesis. Nevertheless, the same researcher noted that management support did not help employees to adopt the risk-taking behaviour which is also essential for becoming an entrepreneur. Thus, management support makes employees more innovative but not necessarily more risk-taking. While both innovation and risk-taking behaviour are essential for entrepreneurship, management support does not tackle all aspects, and therefore the other factors comprising corporate entrepreneurship environment may also be important.

There is also agreement between the thesis findings and Harrison et al. (2018) who claimed that management support was essential in influencing entrepreneurial intentions. The

management support is associated with the provision of employees with the company resources, building their technical skills, developing problem solving skills, and nurturing relationships skills. All of them can be used as assets for future entrepreneurial activities. At the same time, similar to Muralidharan and Pathak (2018), Felix et al. (2019) argued that the effectiveness of management support was conditional on the type of leadership at the organisations. These findings imply that leadership is essential for building an effective CE environment in which employees will be growing to learn how to be more innovative, proactive, and how to take reasonable risks with new projects, which will be translated into stronger entrepreneurial intentions. However, not all companies have the same organisational culture and transformational leadership. Therefore, a potential avenue for extending this thesis research would be to connect the factor of organisational culture to leadership types and endogenize the CE environment as a product of leadership.

This thesis has also supported the previous work of Delanoë-Gueguen and Liñán (2019) and Nielsen et al. (2019), which claimed that greater autonomy at work positively contributes to entrepreneurial intentions of employees. Based on Nielsen et al. (2019), work autonomy was conceptualised in this research as the freedom at work provided to employees that gave them flexibility in performing work-related tasks. In line with Delanoë-Gueguen and Liñán (2019), this thesis has shown that autonomy positively affected the formation of entrepreneurial intentions among employees in Abu Dhabi. This can be explained by the argument that work autonomy boosts employees' creativity and provides confidence to achieve the desired results. In fact, the proposition of Delanoë-Gueguen and Liñán (2019) is supported by the finding of the statistically significant positive effect of work autonomy on self-efficacy in this thesis.

In contrast to prevailing empirical evidence suggesting that rewards and reinforcement should stimulate entrepreneurial intentions among employees (Choi and Presslee, 2023; Ruiz-Alba et al., 2019), this thesis did not provide enough evidence to support this in the context of Abu Dhabi. This could be the case because employees in Abu Dhabi who work in the private sector might be working primarily not because of the monetary rewards, which tend to be higher in the public sector in the UAE, but because the job in the private sector is interesting and associated with more creativity and possibility to realise one's talents. The findings from this thesis agree with Vuorio et al. (2018) who showed that intrinsic motivators worked more effectively than extrinsic motivation (in the form of monetary rewards) in stimulating entrepreneurial intentions among employees. According to their research, intrinsic factors are linked to better creativity, and focus on learning and ability to solve complex tasks individually. These factors are essential for entrepreneurship. In contrast, Ruiz-Alba et al. (2019) argued that employees who received monetary rewards were more motivated to take on more

challenges at work, and this increases their confidence and leads to the development of entrepreneurial intentions. The lack of the statistically significant relationship between these variables in this thesis suggests that the context of private sector firms in Abu Dhabi is different in terms of culture and human behaviour from the context of developed countries where rewards played a significant role in motivating entrepreneurial intentions.

#### 7.1.2. Discussion of Indirect Effects

This thesis has successfully confirmed the mediating hypothesis on the role of entrepreneurial orientation. In particular, H1 stating that entrepreneurial orientation mediates the effect of corporate entrepreneurship on the entrepreneurial intentions of employees in Abu Dhabi has been supported in this research. These findings extend the previous academic research conducted by Martins and Perez (2020) who found that the perception of entrepreneurship had produced a significant effect on EI through the channel of entrepreneurial orientation of individuals. This thesis demonstrated that EO plays a much wider mediating role than previously thought as it also significantly and positively mediates the effects of corporate entrepreneurship constructs on entrepreneurial intentions. This evidence also extends the Theory of Planned Behaviour. While the findings of Martins and Perez (2020) mostly supported this theory and used constructs closely linked to this theory, this thesis made a step further and found that social norms described by the Theory of Planned Behaviour are necessary but insufficient factors to fully explain entrepreneurial intentions.

The findings attained from testing H1, stating that Entrepreneurial orientation mediates the positive effect of corporate entrepreneurship environment on the entrepreneurial intentions of employees in Abu Dhabi, have also extended the previous studies produced by Awang et al. (2016) and Twum et al. (2021). The latter examined the direct effects of EO constructs such as risk-taking, innovativeness and proactiveness on entrepreneurial intentions and confirmed that the effects were positive and statistically significant. However, their research ignored endogeneity issues and were unable to explain EO, treating this construct as exogenous. This thesis has elaborated on this an explained EO constructs by the dimensions of the CE environment. As a result, a new finding emerged showing that the CE environment affects EI not only directly but also indirectly through EO.

It is interesting to note that similar positive results that had been generated by Twum et al. (2021), were also detected in other geographical regions such as Ghana (Twum et al., 2021), Tunis (Inoubli and Gharbi, 2022), India (Kumar et al., 2020; Hassan et al., 2021), South Korea (Kumar et al., 2020), Indonesia (Wardana et al., 2021), and Nigeria (Shamsudeen et al., 2017), suggesting that the relationship could be universal. However, this thesis has shown that this approach is rather flawed as EO is not a purely exogenous factor, but is significantly determined by the corporate entrepreneurship environment. Thus, this study has contributed

to the available knowledge by endogenizing entrepreneurial orientation and offering a different take on its role in determining entrepreneurial intentions.

The findings from this thesis have shown that more time available to employees positively contributes to their innovativeness, but there was no direct effect on entrepreneurial intentions of employees in Abu Dhabi. However, since innovativeness is positively associated with EI, it can be stated that time availability produced significant positive indirect effects on EI mediated by EO variable of innovativeness. This finding agrees with the previous work by Marques et al. (2018), who found that employees with more time availability were more creative and innovative, which helped them to perform challenging tasks better and on time. Thus, they asserted that time availability was a crucial organisational factor that could lead to building entrepreneurial intentions among employees. This thesis took Marques et al. (2018) research a step further by proving that both direct and indirect effects of the CE environment on entrepreneurial intentions exist in the context of Abu Dhabi.

At the same time, Douglas et al. (2021) found no statistically significant associations between time availability and entrepreneurial intentions. These differences in results could be explained by country specific cultural factors as the studies were conducted in different contexts than this research. In particular, this thesis focused on the private sector employees in the UAE whereas Douglas et al. (2021) focused on employees in Australia. The sample characteristics also differ significantly as the respondents in this thesis came from the Muslim background and in terms of demographics, the sample was comprised predominantly of men, whereas Douglas et al. (2021) surveyed employees from mostly Christian or non-religious backgrounds and the composition of men and women was almost equal. Nevertheless, other studies from different countries such as China show support of the positive and statistically significant association between time availability and entrepreneurial intentions.

Regarding the effects of the CE environment on organisational commitment, this thesis has shown that management support is positively related to OC of employees in Abu Dhabi. In line with Singh and Onahring (2019), organisational commitment was understood as loyalty to the organisation in which employees work. Singh and Onahring (2019) established the positive effects of management support on loyalty to their company through the channel of job satisfaction, and this thesis results have suggested the same direct effects from management support to the organisational commitment in the models with and without moderators, even though in the models with moderators the effect was marginally weaker (but still statistically significant). However, in contrast to Singh and Onahring (2019), this thesis has not confirmed that salary and rewards of the employees were positively affecting employees' commitment to the organisation. This may be explained by the difference in motivation of employees working in the private sector of Abu Dhabi compared to other contexts where rewards played a stronger

role. For example, in contrast to this thesis, Khalid (2020) showed that rewards influenced organisational commitment and the management support played only a moderating role rather than having a direct effect that this thesis has shown. One of the reasons why Khalid (2020) and Singh and Onahring (2019) linked organisational commitment to salary and management support is because financial rewards were often treated as constituents of (proxy for) total management support, which is also evidence in Ahmad et al. (2020). This thesis, in contrast, treated management support and rewards as separate constructs with the former measuring predominantly the support of innovative ideas initiated by employees whereas rewards represented the support of the employee's day-to-day tasks and the job they normally do.

The results of this thesis are in line with Zhenjing et al. (2022) who analysed the effects of management support on employee commitment to the company showing that supportive management made employees more loyal to their organisation. Via creating a positive environment in the workplace through greater support, the management could stimulate more effective work and commitment among the staff.

This study has also shown that greater autonomy at work positively contributes to organisational commitment of employees in Abu Dhabi. This finding is consistent with the work of Jung et al. (2020) who found that empowering leaders were nurturing work autonomy, encouraging their employees to take part in organisational activities, processes and decision making. Such engagement of employees and giving them autonomy in decision making had a positive impact on the employees' commitment to the company. This agrees with the findings from the thesis that work autonomy was positively and significantly associated with OC. These results are also consistent with Lee et al. (2021) who also evidenced a positive role of giving more autonomy to employees in establishing greater loyalty to the organisation and more commitment. At the same time, Lee et al. (2021) noted that employees could work more effectively under greater autonomy if this was accompanied by positive feedback from the management. This shows that the management support through positive feedback could amplify the effects of work autonomy.

The findings from the thesis are also in line with Miedaner et al. (2018) who evidenced similar positive associations between work autonomy and commitment to the organisation in a narrow context of the healthcare industry, whereas this thesis has wider implications as it provided a cross-industry evidence suggesting that the relationship holds in various industries, not only healthcare. Furthermore, Miedaner et al. (2018) considered several types of autonomy including autonomy in decision-making, autonomy in work methods and autonomy in work scheduling, and showed that the significant positive relationship does not hold for all these types but only for autonomy in decision-making.

Gulyani and Sharma (2018) found a significant positive effect of monetary rewards on the organisational commitment but this thesis did not produce enough evidence to support this effect as the relationship was found to be negative. The findings of Gulyani and Sharma (2018) revealed that monetary rewards had a significant influence not only on the commitment to the firm but also on the employee happiness which they also assumed was related to the organisational commitment. Employees who obtained more rewards exhibited greater levels of happiness and more loyalty in return. They also noticed that positive reinforcement produced a similar positive influence on employees' commitment. Similarly, Neessen et al. (2019) asserted that rewards prompted employees to engage in more innovative activities and to be more loyal to their organisations.

The results of this thesis have revealed that time available to employees positively contributes to their organisational commitment in Abu Dhabi. This outcome of the research is consistent with previous literature such as Rodríguez-Sánchez et al. (2020) who found that employees were more attracted to companies that offered greater flexibility to the work schedule and the work-leisure balance. Such employees also demonstrated greater commitment to the organisations that provided them with more free time. In the same vein, this thesis produced the findings that agree with Simon et al. (2023) who compared the organisational commitment of employees working from home and working from the office. While Simon et al. (2023) has shown that people working from home demonstrated more commitment to the company than the employees working from the office in spite of the fact that remote work makes socialisation difficult, this could be attributed to greater autonomy rather than time availability. In other words, even though Simon et al. (2023) argued that those who worked from home had more time available, it could be a result of self-managing the work schedule, which is similar to work autonomy. Nevertheless, both time availability and work autonomy were significant predictors of organisational commitment in this thesis, which makes the results consistent with Simon et al. (2023) in spite of the differences in the formulation of time availability.

Another mediating hypothesis, namely H2, stating that entrepreneurial orientation mediates the effect of corporate entrepreneurship on the organisational commitment of employees in Abu Dhabi, has also been supported by the results of this research. It can be noted that the findings have extended the previous research conducted by Farrukh et al. (2017) who also treated EO as a mediator, but they and Niemann et al. (2022) assumed a different path of causality running from organisational commitment to EO and corporate entrepreneurship variables of innovativeness and risk-taking. This thesis expanded the CE, constructed with the proactiveness measure, and has argued that causality can run in the opposite direction than previously thought.

The thesis results have also elaborated on the previous evidence provided by Boonsiritomachai and Sud-On (2021). The latter argued that entrepreneurial orientation of employees made them less committed to the organisations, suggesting the presence of negative rather than positive mediation between CE and OC provided by EO, which means that the assumed direction of causality is the same but the sign of the mediator is the opposite. This peculiarity can be explained by the fact that employees with higher entrepreneurial orientation would be willing to become more independent and start their own venture instead of working at the same organisation in spite of the fact that the organisation provides resources and opportunities.

This thesis has also provided support for the mediating hypothesis regarding the self-efficacy of employees. Hypothesis H3 stated that entrepreneurial orientation mediates the effect of corporate entrepreneurship on the self-efficacy of employees in Abu Dhabi. This hypothesis has been supported with the evidence provided by the linear regression analysis. The mediation produced positive effects suggesting that corporate entrepreneurship develops selfefficacy in employees and the effect is amplified by their greater entrepreneurial orientation. These results expand the previous work by Gorostiaga et al. (2019) who explored the direct associations between entrepreneurial orientation and self-efficacy in the context of vocational training. They argued that self-efficacy was significantly and positively predicted and explained by the dimensions of EO such as competitiveness, pro-activeness, and learning orientation. However, they did not treat the EO constituents as mediators and assumed that there were only direct effects. A similar approach was undertaken by Patwary et al. (2022) who assumed that EO had only direct effects on self-efficacy and thus they also ignored the indirect effects channelled from CE to self-efficacy through EO. The present thesis has elaborated on their findings and expanded their model demonstrating that there are both direct and indirect effects present.

In summary, by testing the mediating indirect effects channelled by EO from the CE environment to EI, OC and SE, this thesis has expanded the previous knowledge and elaborated on previous models and direct effects reported in the past. Among the dimensions of the CE environment, Work Autonomy produced significant indirect effects on EI mediated by Innovativeness and Risk, which are the two measures of EO. At the same time, management support positively affected EI both directly and indirectly. Thus, the study reported partial mediation from EO. Time Availability produced mostly indirect effects on C whereas Work Autonomy had both direct and indirect effects on OC. This again shows partial mediation and the main channel through which mediation was exhibited is Proactiveness. SE was also indirectly affected by Time Availability mediated by the same measure of Proactiveness.

## 7.1.3. Discussion of Moderating Effects

This thesis has also tested a number of moderating hypotheses in relation to the effects on the three key dependent variables represented by entrepreneurial intentions, organisational commitment, and self-efficacy. The thesis used three main moderators, namely: the interaction terms between CE variables and three individual characteristics; well-being, hyperactivity, and fear of failure. This thesis has not provided support for hypothesis H4a, stating that at higher levels of well-being, there is a stronger positive effect of corporate entrepreneurship on the entrepreneurial intentions of employees in Abu Dhabi. These findings extend the previous evidence provided by Shir and Ryff (2022) and Shir et al. (2019) who treated well-being as an endogenous variable that was explained by corporate entrepreneurship factors such as autonomy, relatedness and competence. Similar treatment was observed in some other empirical studies as well (Arasanmi and Krishna, 2019; Singhal and Rastogi, 2018). The original contribution of this thesis is in arguing that well-being is a more complex phenomenon than these which previous studies tried to model as a function of corporate entrepreneurship factors only. By doing so, they imposed the omitted variable bias on their research. The hints of something wrong being with the previous assumption made by Shir and Ryff (2022), Gish et al. (2022) and Shir et al. (2019) on the direct effects of CE on well-being can be found in other studies that detected the opposite direction of causality suggesting that there could be issues with endogeneity (Nikolaev et al., 2023). This issue is resolved when well-being is treated as a moderator in the relationship between CE and EI. However, this variable and its interaction terms with CE variables did not show statistically significant results.

While well-being was not a significant moderator in the case of entrepreneurial intentions, it did produce statistically significant moderating effects on the relationships between CE and organisational commitment. Thus, H4b has been supported based on the results of this study.

The research on employees from the private sector of Abu Dhabi has not supported another moderating hypothesis H4c, which states that at higher levels of well-being, there is a stronger positive effect of corporate entrepreneurship on the self-efficacy of employees in Abu Dhabi. The interaction terms between wellbeing and CE variables were not statistically significant. This result disagrees with the previous evidence obtained by Marshall et al. (2020) who found that well-being was directly influenced by self-efficacy rather than vice versa. Furthermore, they also admit there is an influential role of external factors such as the access to resources exhibiting a significant influence on both the well-being and self-efficacy of employees.

The results of this thesis supported hypothesis H5a, stating that at higher levels of hyperactivity, there is a stronger positive effect of corporate entrepreneurship on the entrepreneurial intentions of employees in Abu Dhabi. This study has enhanced the previously

available evidence of the direct effects only (Antshel, 2018; Bernoster et al., 2020; Wismans et al., 2020; Yu et al., 2021; Tucker et al., 2021). The positive moderating effects discovered in this thesis and represented by interaction terms between individual characteristics and CE variables suggest that the direct effects that were assumed to exist between CE and EI were conditional on individual characteristics and this could explain discrepancies between previous results.

The results from this thesis provide support for hypothesis H5b, stating that at higher levels of hyperactivity, there is a stronger positive effect of corporate entrepreneurship on the organisational commitment of employees in Abu Dhabi. It is interesting to note that previous studies such as Agnew-Blais and Michelini (2023) argued that individuals with hyperactivity demonstrated worse performance at work and could not complete the assigned tasks, which made it difficult for them to stay committed to a particular company for a long time. The discrepancies in the results can be explained by the different ways in which hyperactivity was measured and it is likely that the results would be sensitive to the choice of scale. The results of the thesis appear to be surprising and going against conventional expectations that were previously reported by Rosario-Hernández et al. (2020). Therefore, it would be interesting to further distinguish between general hyperactivity and hyperactivity associated with a clinical disorder and test how these two different types of hyperactivity would moderate the relationships.

The findings from this thesis do not provide sufficient support for hypothesis H5c, which states that at lower levels of hyperactivity, there is a stronger positive effect of corporate entrepreneurship on the self-efficacy of employees in Abu Dhabi. The moderating effect could be rather complex as a number of previous scholars reported direct effects. For example, Song et al. (2021) demonstrated that hyperactivity could produce negative effects on the self-esteem, self-efficacy, and confidence of employees. Similar negative associations between hyperactivity and self-efficacy were previously reported by Weibel et al. (2020) and Di Lorenzo et al. (2021).

In this study, the moderating hypothesis H6a, stating that at higher levels of fear of failure, there is a weaker positive effect of corporate entrepreneurship on the entrepreneurial intentions of employees in Abu Dhabi, was not supported, based on the findings from the multiple linear regression analysis reported in the previous chapter. The findings of the insignificant moderating effects of fear of failure suggest that CE stimulates entrepreneurial intentions of employees regardless of whether they are afraid of making a mistake or not. Similar to this, the findings demonstrated no significant moderation of the relationship between CE and SE by fear of failure, thus rejecting H6c, as evidenced from the previous chapter. It is interesting to note that one of the surprising findings from this thesis is that it has not supported

hypothesis H6b, which states that at higher levels of fear of failure, there is a stronger positive effect of corporate entrepreneurship on the organisational commitment of employees in Abu Dhabi. In contrast to this, the findings revealed a statistically significant negative moderation of the relationship between CE and SE by fear of failure. This finding may explain why in some companies better corporate entrepreneurship characteristics create more loyalty and commitment to the organisation among its employees whereas in others, the same CE environment leads to greater EI with employees leaving the company and pursuing their own entrepreneurial goals.

### 7.2. Conclusions

## 7.2.1. Implications for Practice and Theoretical Contributions

The attained results from this thesis have particular practical implications as they can provide a roadmap for corporate managers to stimulate entrepreneurship, self-efficacy and organisational loyalty. At the same time, the results of the research do not support some of the established ideas such as that higher rewards can make employees more loyal to their organisations. The reality was found to be much more complex than previously believed.

The first implication of the research is that by nurturing corporate entrepreneurship in their organisations, companies can grow not only entrepreneurs who will leave the business but also more loyal employees as their commitment to the organisation was found to be growing under the influence of corporate entrepreneurship factors. Companies may also create conditions for intrapreneurship, which means they will attract and keep more entrepreneurial employees and benefit from their skills. However, not all factors of corporate entrepreneurship are equally important, and organisations are recommended to make discretion when choosing which elements of corporate entrepreneurship to focus on in order to achieve their goals. For instance, if an organisation wants to gain more loyal staff and ensure they will be committed to the company, the management is recommended to focus on providing greater support to the employees in their workplace. One of the reasons why this could be effective is because the management support requires closer communication between managers and employees, which builds not only their efficiency at completing tasks but also interpersonal relationships with the stakeholders of the organisations. Through greater personal ties, employees will be more motivated to stay with the company in which they feel safe, secure, and accepted. Therefore, management support is an essential determinant of building organisational loyalty, which has been proven in this thesis through regression analysis in the context of Abu Dhabi.

It is valid to note that the constructs used to measure the CE environment of Abu Dhabi organisations were based on the employee perceptions, and they could be different from the objective CE environment or the perceptions of the CE environment by other stakeholders, such as managers and owners of the organisations. This might lead to several serious implications for practice, such as the need for the management of the organisations to tackle the potential perception gap, collecting more feedback from employees to be certain that their perceptions are aligned with what was envisioned by the company. Furthermore, the role of communication becomes vitally important in this case, as closer communication will help align the perceptions of the CE environment and help stakeholders understand each other. This, in turn, will facilitate more effective management of staff. While managers and employees can have different perceptions of the CE environment, it is likely that both groups of stakeholders will be able to trace the positive and negatively changes in the CE environment more objectively, as there is a reference point based on their previous perceptions. Thus, it can be argued that changes and improvements in the CE environment are more important for delivering greater EI, OC, and SE than the actual levels of CE environment observed today. This implies that managers should initiate periodic changes in the CE environment for the employees to notice the positive differences and respond. The success of the implementation should be tracked with feedback and data analytics.

Another implication of this research for practice stems from the detected association between work autonomy and all three dependent variables used in this study, namely: entrepreneurial intentions, organisational commitment, and self-efficacy of employees. On the one hand, by providing more autonomy and less supervision to employees makes them more independent, which could arguably lead to their decisions to work independently from their company. However, the results of this thesis have shown the opposite. More work autonomy was associated with greater organisational commitment. This suggests that the employees who are given more autonomy at their work appreciate this and value the companies that gave them such opportunities. This makes them less willing to leave the firm in pursuit of their own agenda or working for competitors. The finding that greater work autonomy may also lead to higher entrepreneurial intentions of the employees and make them want to start their own business does not contradict the previous statement because the research also showed that this relationship was sensitive to the entrepreneurial orientation of employees. For those employees with stronger entrepreneurial orientation, greater autonomy could stimulate their decision to begin their own independent business, which the company can exploit by stimulating intrapreneurship when the entrepreneurial employees will be allowed to use the company's resources and run their projects as their (co-)owned business. Such a synergy will benefit both the employee and the company. However, for the rest of the employees, greater

work autonomy would be associated with developing greater organisational loyalty and commitment. Thus, organisations are recommended to give more autonomy to their employees as this would result in having a more loyal staff for the organisations, which will benefit them in the long run. This thesis has included the years of experience with the current employer (tenure) as one of the control variables, and it was initially expected that the staff with greater tenure would have higher levels of EI and SE and would demonstrate greater commitment. However, the findings revealed that this control variable was not statistically significant, suggesting that previous length of stay with the company is not indicative of future intentions.

This finding may contradict the postulates of agency theory, which argues that agents are seeking their own self interests. Thus, in order to align their interests with the organisation's goals and agenda, more supervision and control should be exercised by principals. This seeming contradiction may emerge due to the unclear definition of who agents are and who principals are in an organisation. In the original formulation of agency theory, principals are generally represented by shareholders and managers who work on behalf of shareholders represent agents. In this thesis, however, shareholders are not present as actors, and the research focuses on managers and employees. While by analogy, it could be stated that employees are agents and managers are therefore principals, this is not equivalent to the association between managers and shareholders who own the business. Both managers and general employees are employed by the company and their interests are less conflicting as in the case of the manager-shareholder relationships. Therefore, the results of this thesis do not go against the agency theory and do not break the theoretical foundation of the study. However, it is valid to note that agency theory has been heavily criticised. For example, while agency theory suggests that opportunistic behaviour of agents should be controlled by incentives or greater control mechanisms, the Transaction Cost Theory, which also focuses on opportunism, suggests that there are broader implications and that such opportunistic behaviour should be controlled through governance schemes and long-term contracts (Ghoshal et al., 1996). Furthermore, agency theory and its implications have been criticised by proponents of the Stewardship Theory, which posits that agents are more sensitive to internal stimuli and are naturally inclined to do what is good and what is in the interest of the group when they also belong to the same group (Löhde et al., 2021).

Another practical implication of the research findings is that companies will benefit from giving more free time to employees instead of making them work under the constant pressure of deadlines. While similar to the effects of work autonomy, more time availability can prompt both entrepreneurial intentions and organisational commitment, the channel through which the effects are transmitted are similar. When individuals have high entrepreneurial orientation,

they are also more likely to have greater entrepreneurial intentions given more autonomy and more time available at their work. However, for the rest of the employees, greater time availability implies a better work-life balance, which will result in more well-being and productivity, which will eventually lead to greater commitment to the organisation and higher loyalty. Moreover, the employees who are given more free time have a better chance to excel at their work-related skills as they can invest this time in self-education and self-learning, from which the organisation will benefit. This is confirmed by the finding that more time availability for employees was significantly and positively associated with their self-efficacy. They become more confident in their skills as they gain knowledge and rest.

These findings may have even wider implications not only for corporate managers but also for policy makers who make decisions about the work week, maximum number of hours and minimum wage. In order for the economy of Abu Dhabi to diversify and become less reliant on energy exports, private sector companies from other industries have to be not only more innovative but also more attractive for employees. It was shown that there is a great imbalance between the proportion of local residents employed in the public sector organisations and private sector organisations. As private sector companies become more attractive, offering better work hours, more benefits to employees, more autonomy and more support, there will be a greater chance for achieving the right balance and stimulating diversification.

This thesis also has theoretical implications as it extends and elaborates on previous frameworks reviewed in Chapter 2. One of the theoretical foundations of this work is the Theory of Planned Behaviour, which predicts that actions are preceded by employee intentions. In this thesis, intensions are represented by the construct of entrepreneurial intentions, which along with organisational commitment and self-efficacy were the main dependent variables in the study. According to the Theory of Planned Behaviour entrepreneurial intentions would be influenced by attitudes, behavioural control and subjective norms. The attitudes towards entrepreneurship are represented in this study by the entrepreneurial orientation of the individuals. At the same time, behavioural control indicates the extent to which it is easy or difficult for employees to take actions and become entrepreneurs. In this thesis, behavioural controls were encompassed by the corporate entrepreneurship environment, which included work autonomy and time availability, among other factors. The more work autonomy the employees have and the more time available they possess, the easier it is for them to become entrepreneurs. However, if they do not have intentions to become entrepreneurs, autonomy will still imply that they will develop greater loyalty and commitment to the organisation that provided them with the time availability and autonomy at work. The Theory of Planned Behaviour also suggests that subjective norms should affect the intentions, and they are usually represented by the opinions of the people

that surround the individual making the decision. In the context of this research, management support can be viewed as a subjective norm. All these key representatives of the constructs from the Theory of Planned Behaviour were found to be statistically significant factors in this research, thus proving the theory validity and applicability to the case of corporate entrepreneurship and entrepreneurial intentions. At the same time, the theory has been extended by including individual characteristics such as well-being and hyperactivity, which also help predict entrepreneurial intentions of employees in Abu Dhabi.

This study has challenged the narrow interpretation of the utility-maximisation framework reviewed in the previous works of Kashmoola et al. (2017) and Douglas (2020), where utility is limited to pecuniary benefits. This narrow-utility framework predicts that providing employees with more financial rewards and benefits should stimulate their commitment to the organisation (Maroufkhani et al., 2018; Marques et al., 2019). These arguments were not supported by the findings from this research. In contrast, the results revealed a much stronger effect of internal intangible factors such as work autonomy and time availability in driving the organisational commitment of employees whereas the financial rewards justified by the narrowly-interpreted utility maximization framework were not found to be statistically significant. This finding implies that some modifications to the applied utility maximisation theory could be considered, extending the utility function with non-financial benefits. Related to that, the principal-agent theory could be extended. This theory argues that only financial incentives and control mechanisms could align the interests of principals and agents. However, incentives, as evidenced from rewards, do not play a major role. To be more specific, regular monetary incentives for the job performed by employees do not play the role they are expected to play, but incentives in the form of the provision of greater work autonomy and time have a stronger influence on organisational commitment.

#### 7.2.2. Limitations

The study's methodological choices may be associated with certain limitations. Firstly, the study uses cross-sectional data and does not employ any longitudinal data analysis methods. This precludes from utilising estimators like dynamic panel data models to control for endogeneity, and also from assessing whether the relationships between CE, EI, EO, SE, and OC vary over time. Further, the UAE is currently undergoing structural changes in its economy as a part of achieving the goals of the UAE Vision plan (Ahmed et al., 2022). As such, it is possible that pre-Vision data might not accurately describe the UAE's changing corporate and labour environment. The regressions run in this study measure instantaneous associations between the variables and they are not indicative of whether these relationships will hold in

the long run. In particular, the slope coefficients report how different employees would react to the changing CE right now. However, they do not indicate whether an element of CE such as management support would continue to exhibit the same effects over and over again. After all, employees may get used to the CE environment and management support and treat it as a norm rather than a stimulus. As such, the reaction of employees who previously did not work in a good CE environment and then switched to an organisation with strong CE environment would be stronger compared to employees that were constantly exposed to the same CE environment even if it was always good. Studying cumulative effects will require more conditions and more information such as surveying the same employees at different points of time and measuring whether effects eventually decline or stay strong in the long run. Some of the statistical techniques such as Bayesian statistics allow for updating the conditions and prior information to measure changes in the effects over time. While gathering longitudinal data and applying dynamic regression models, cointegration tests or Bayesian statistics might solve the issue and help measure cumulative effects over time, this is an avenue for future research. Nevertheless, it could be possible that a study of short-term variations in relationships would be beneficial. However, as the present study provides a snapshot of the most recent state of perceived entrepreneurial environment, the results should still be valuable for informing future government policies and decision-making of private and public organisations in the country.

Secondly, the sample might not be accurately representing organisations from certain industries. It is possible that the relationships between EI, CE, SE, and OC in private corporations from other industries differ from those that operate in the services industry. There may be industry-level heterogeneity in organisational culture, innovation costs and practices, and the amount of autonomy and entrepreneurial activities that could be allowed without impairing established operations and processes. Thus, the results of the present paper should be generalised to the whole UAE economy with caution.

Thirdly, the results of the research could be sensitive to a common method bias (CMB). This is a potential error caused by the measurement of the dependent and independent variables on the basis of the self-reported inputs provided by the same respondents in a survey (Podsakoff et al., 2024). In an ideal situation, each variable has to be sourced from different respondents and using different methods of data collection to avoid CMB. However, this is often difficult or nearly impossible to achieve in practice. CMB may also arise due to the extensive use of the same Likert scale to measure all observed variables in the survey (Jordan and Troth, 2020). When respondents have to choose an answer from a few multiple choices, they can eventually be drawn to answering some questions mechanically, or, if the questions are worded similarly, they may not engage in excessive thought process to think of the

appropriate answer and choose the one they recently provided to another similar question. Thus, CMB can be addressed in future studies by reverse-coding responses and rewording positive statements from a scale into negative statements while maintaining the main logic. Also, CMB can be greatly reduced if several data collection instruments and several groups of respondents were used (Kock et al., 2021).

Finally, the analytical model used in the paper does not capture bidirectional effects and feedback loops. At the same time, recent literature has highlighted the complex nature of the CE-El nexus. For example, the theory of entrepreneurial spirals is based on the idea that a positive effect of CE on EI would then feed into the loop by enhancing CE in its own turn (Shepherd et al., 2010). Likewise, OC has been suggested to impact CE since managers might want to alleviate commitment issues by improving the CE environment. Instead, the present study focuses on specific pathways and directions for which there is scarce research. As such, the adopted methodology can only partially address the gaps in the entrepreneurship literature, due to data limitations. In this research, the respondents were surveyed after they had been hired by the companies in which they work and in which they can perceive the CE environment. This created a potential bias, as there are no responses from the preemployment period. Hence, it is difficult to draw a full picture of the relationships between CE, EO, EI, OC, and SE. While endogeneity testing could solve this problem, some longitudinal observations are required in order to construct a panel regression model and add instrumental variables (IV) to explore the potential reverse causation and account for it in the final model. Furthermore, such a testing could yield different results in organisations located in different countries that have different culture. This is explained by the differences not only in the culture but also in the specifics of the labour market and job search. For instance, in Western Economies, such as the US and UK, the recruitment process is often merit-based. The more skills the job seeker is showing, the more likely they will be hired. In Abu Dhabi, the hiring process is more relationship-based, which means that more emphasis is placed on networking. This will contribute to naturally greater OC in Abu Dhabi organisations than in the UK or US, other things being equal. Furthermore, the UK and US organisations tend to be more cross-cultural, whereas a greater cultural fit would be expected in Abu Dhabi. Finally, there are different tax regimes in the countries that can affect EI of employees. While the UK and US tax system may not be as favourable for running an own business, the tax environment with free zones in more favourable for entrepreneurship in the UAE. This means that CE environment in organisations will be differently shaped by external factors and internal perceptions of CE by stakeholders in different countries. Furthermore, employees can develop changes in EI, OC, or SE while working in the organisation, but organisations as well will be

looking for people with particular EI, OC, and SE characteristics. This complicates the analysis and provides an avenue for future research.

#### 7.2.3. Recommendations for Future Research

In order to address the current limitations of the research, several recommendations are provided for future studies. As this thesis has focused on the survey of private sector employees in Abu Dhabi at a given point of time, it does not assess evidence on the dynamics of the association between the key constructs explored herein, namely: CE, EI, EO, SE, and OC. While these relationships are not expected to change frequently and exploring them does not require a time-series analysis with high-frequency, major exogenous shocks or shifts in the economy can produce a great influence on these associations. Furthermore, changes in the generations, as new and younger labour force enter the market, are also expected to cause changes in the established relationships. Therefore, future studies are recommended to explore different cohorts of people and conduct series of surveys such as one in five years to monitor how the associations between CE, EI, EO, SE, and OC change over time and from generation to generation.

This research has not accounted for the industry differences and cultural differences. The former were omitted from the analysis because it would have required using cluster sampling to draw the data randomly from each given industry. Because this information on clusters was not available a priori, simple random sampling technique was employed instead. While background characteristics with information on the sectors in which the companies operated were collected, these industries were not equally represented. Therefore, in order to assess industry differences in the explored relationships, future studies are recommended to employ the cluster sampling technique and ensure that all major sectors of the economy are equally represented in the sample.

Cultural differences were not explored in this research because its scope was limited to a single emirate, Abu Dhabi. However, future studies are recommended to extend the findings and test the associations between CE, EI, EO, SE, and OC in the international context that would allow for making comparisons between countries. While individual research on developed countries is available based on the surveyed literature in Chapter 2, there is still a gap in research on the cross-country comparison of the findings. This could enrich the knowledge in the field even further. Future studies are recommended to expand the Theory of Planned Behaviour that underpinned this research with the cultural theory. For example, the cultural dimensions measuring masculinity/femininity, collectivism/individualism, uncertainty

avoidance, power distance, long-term orientation and indulgence (Hofstede, 1984), could be used as additional predictors of EI, OC and SE. In particular, it could be expected that more individualistic cultures will exhibit higher levels of EI whereas more collectivist cultures would show greater levels of OC. These differences can shed light on how the same constructs of corporate entrepreneurship can produce different effects on EI, OC and SE.

As the limitations section has shown, the method of regression analysis and the analytical model employed in this study suffer from several assumptions about the direction of causal relationships that were indicated with arrows. However, based on the rich amount of literature covered in Chapter 2, it could be deduced that the associations between the explored constructs could be more complex than they are presented in this model. In particular, future researchers are recommended to test if significant endogeneity issues are observed between the constructs. Endogeneity may arise in the case of bidirectional causality between the variables, which could be treated by introducing instrumental variables (IV) and running twostage IV regressions. Furthermore, future studies are recommended to check for the hidden unexplored variables that could trigger the omitted variable bias in research. When a significant variable is missing in the analytical model, the fit of the regression would be weaker and the role of the remaining variables may be exaggerated compared to their actual role in reality. Therefore, it is important to ensure that analytical models are consistent with both theories and earlier empirical evidence on the relationships between CE, EI, EO, SE, and OC. While in constructing the guestionnaire and the empirical models, the best effort was made to account for the existing knowledge on the relationship between these constructs, there is scope for improvement.

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# **Appendices**

# Appendix A. CE scale

#### Autonomy

- CE1. I have the freedom to decide what I do on my job.
- CE2. It is basically my own responsibility to decide how my job gets done.
- CE3. I have much autonomy on my job and am left on my own to do my own work.
- CE4. I feel that I am my own boss and do not have to double-check all of my decisions with someone else.
- CE5. I seldom have to follow the same work methods or steps for doing my major tasks from day to day.

#### Time Availability

- CE6. I have just the right amount of time and workload to do everything well.
- CE7. I always have plenty of time to get everything done.
- CE8. I feel that I am always working with time constraints on my job.
- CE9. My co-workers and I always find time for long term problem solving.
- CE10. During the past three months, my workload kept me from spending time on developing new ideas.

### Management Support

- CE11. People are often encouraged to take calculated risks with ideas around here.
- CE12. This business unit supports many small and experimental projects realizing that some will undoubtedly fail.
- CE13. Senior managers encourage innovators to bend rules and rigid procedures in order to keep promising ideas on track.
- CE14. Those employees who come up with innovative ideas on their own often receive management encouragement for their activities.
- CE15. Money is often available to get new ideas off the ground.

#### Rewards/Reinforcement

CE16. My supervisor will give me special recognition if my work performance is especially good.

CE17. My manager will tell his/her boss if my work was outstanding.

CE18. The rewards I receive are dependent upon my work on the job.

#### Appendix B. EO scale

#### Risk-taking

EO1. I value new plans and ideas, even if I feel that they could fail in practice.

EO2. I sometimes provide assistance to internal clients without first discussing this with my supervisor.

EO3. In order to be more productive, I sometimes act without the permission of my supervisor.

#### Innovativeness

EO4. I have very little problems with renewal and change.

EO5. I quickly master new routines, procedures and new ways of working.

EO6. When it comes to problem solving, I always search for creative solutions instead of familiar ones.

#### **Proactiveness**

EO7. I always try to find if (internal) clients have wishes or desires that they are not consciously aware of.

EO8. I always actively help internal clients, and not only when I am asked or approached to do so.

EO9. I am constantly looking for new ways to improve my performance at the job.

### Appendix C. El scale

El1. I am ready to do anything to be an entrepreneur.

El2. My professional goal is to become an entrepreneur.

- El3. I will make every effort to start and run my own firm.
- El4. I am determined to create a firm in the future.
- El5. I have very seriously thought of starting a firm.
- El6. I have the firm intention to start a firm someday.

# Appendix D. OC scale

- OC1. I would be very happy to spend the rest of my career with this organization.
- OC2. I really feel as if this organization's problems are my own.
- OC3. I do not feel a strong sense of belonging to my organization (reverse-coded).
- OC4. I do not feel emotionally attached to this organization (reverse-coded).
- OC5. I do not feel like part of the family at my organization (reverse-coded).
- OC6. This organization has a great deal of personal meaning for me.

# Appendix E. SE scale

- SE1. I will be able to achieve most of the goals that I have set for myself.
- SE2. When facing difficult tasks, I am certain that I will accomplish them.
- SE3. In general, I think that I can obtain outcomes that are important to me.
- SE4. I believe I can succeed at most any endeavor to which I set my mind.
- SE5. I will be able to successfully overcome many challenges.
- SE6. I am confident that I can perform effectively on many different tasks.
- SE7. Compared to other people, I can do most tasks very well.
- SE8. Even when things are tough, I can perform quite well.

# Appendix F. Well-being scale

- WB1. I have felt cheerful and in good spirits.
- WB2. I have felt calm and relaxed.

WB3. I have felt active and vigorous.

WB4. I woke up feeling fresh and rested.

WB5. My daily life has been filled with things that interest me.

Interval measure: (at no time) 1 2 3 4 5 6 7 (all of the time)

Appendix G. Hyperactivity scale

HA1. How often do you have trouble wrapping up the final details of a project, once the challenging parts have been done? (reverse-coded)

HA2. How often do you have difficulty getting things in order when you have to do a task that requires organization? (reverse-coded)

HA3. How often do you have problems remembering appointments or obligations? (reverse-coded)

HA4. When you have a task that requires a lot of thought, how often do you avoid or delay getting started? (reverse-coded)

HA5. How often do you fidget or squirm with your hands or feet when you have to sit down for a long time?

HA6. How often do you feel overly active and compelled to do things, like you are driven by a motor?

Interval measure: (never) 1 2 3 4 5 6 7 (very often)

Appendix H. Fear of failure scale

FF1. When I am failing, I worry about what others think about me.

FF2. When I am failing, I am afraid that I might not have enough talent.

FF3. When I am failing, it upsets my "plan" for the future.

FF4. When I am not succeeding, people are less interested in me.

FF5. When I am failing, important others are disappointed.

Appendix I. Robustness Check with EI as Dependent Variable for Work Experience > 1

| VARIABLES         ci         ci         coinnov         coinsk         copyoac         ci         ci         ci           age         -0.0958**         -0.0906**         -0.0409         0.0337*         -0.0332*         -0.0857*         -0.0759*         -0.0832*           education         (0.128**)         0.120         -0.0442         (0.0217)         (0.0435)         (0.0473)         (0.0738)           workexp         (0.0783)         (0.0746)         (0.0412)         (0.0358)         (0.0141)         (0.0688**         0.0273         -0.0788*         (0.0738)         (0.0739)         (0.0481)         (0.0688**         0.0273         -0.018**         (0.0738)         (0.0739)         (0.0259)         (0.0888**         -0.0273         -0.018**         (0.0458)         (0.0431)         (0.0431)         (0.0431)         (0.0229)         (0.0238)         (0.0460)         -0.0529**         0.0243         (0.0418)         (0.04033)         (0.0329)         (0.0233)         (0.0339)         (0.0339)         (0.0339)         (0.0339)         (0.0339)         (0.0339)         (0.0339)         (0.0339)         (0.0329)         (0.0242)         (0.0140)         (0.0140)         (0.0140)         (0.0140)         (0.0140)         (0.040)         (0.0421)         (0.0140)  |                    | (1)      | (2)      | (3)      | (4)      | (5)      | (6)      | (7)      | (8)      |
|--|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|
|  | VARIABLES          |          |          |          |          |          |          |          |          |
| clustation         (0.0490)         (0.0470)         (0.0477)         (0.0322)         (0.0127)         (0.0463)         (0.0463)         (0.0746)         (0.0424)         (0.0588)         (0.0155)         (0.1578)         (0.0728)         (0.0738)         (0.0746)         (0.0442)         (0.0588)         (0.0373)         (0.0778)         (0.0738)         (0.0746)         (0.0481)         (0.0437)         (0.04031)         (0.0481)         (0.0381)         (0.0481)         (0.0331)         (0.0461)         (0.0331)         (0.0461)         (0.0501)         (0.0331)         (0.0461)         (0.0501)         (0.0401)         (0.0401)         (0.0401)         (0.0401)         (0.0401)         (0.0401)         (0.0401)         (0.0401)         (0.0401)         (0.0401)         (0.0401)         (0.0401)         (0.0401)         (0.0401)         (0.0401)         (0.0401)         (0.0401)   | age                | -0.0958* | -0.0906* | -0.0409  | 0.0397   | -0.0332  | -0.0857* | -0.0795* | -0.0832* |
| workexp         (0.0783)         (0.0744)         (0.0442)         (0.0344)         (0.0374)         (0.0747)         (0.0723)         (0.0773)         (0.0773)         (0.0773)         (0.0773)         (0.0734)         (0.0734)         (0.0734)         (0.0734)         (0.0734)         (0.0734)         (0.0734)         (0.0734)         (0.0734)         (0.0734)         (0.0734)         (0.0734)         (0.0734)         (0.0734)         (0.0738)         (0.0488)         (0.0483)         (0.0343)         (0.0333)         (0.0334)         (0.0334)         (0.0334)         (0.0333)   | -                  |          | , ,      | (0.0277) |          |          |          |          |          |
| workexp         0.117**         0.106**         0.0431         0.0068**         0.0273         0.013**         0.079**         0.028**           tenure         -0.5648         -0.0667*         0.0320         0.0259*         0.028**         -0.061**         0.033**         0.0734**           position         -0.150**         -0.164**         0.00812         0.0214*         0.0015*         0.013**         0.0134*         0.016         0.012**         0.014         0.0164         0.053**         0.0734**           position         0.150**         0.0163*         0.0388*         0.0041*         0.0081         0.0010         0.012**         0.0104         0.0164         0.0083         0.0084         0.0084         0.0084         0.0084         0.0084         0.0084         0.0084         0.0084         0.0084         0.0084         0.0083         0.0084         0.0080         0.0087         0.0081         0.0089         0.0023         0.00323         0.00329         0.00232         0.00323         0.00329         0.00232         0.00329         0.00233         0.00329         0.00239         0.00329         0.00329         0.0010         0.00329         0.00329         0.00239         0.00329         0.00329         0.00329         0.00329   | education          |          |          |          |          |          |          |          |          |
|  | workexp            |          |          |          |          |          |          |          |          |
| position   |                    |          |          |          |          |          |          |          |          |
| position   | tenure             |          |          |          |          |          |          |          |          |
| Companysize  |                    |          |          |          |          |          |          | ,        |          |
| companysize         0.0340         0.0168         0.0397*         0.0102         0.0281         0.0101         0.0144         0.00330         0.03083           companyage         0.0260         0.00716         0.0480**         0.00320         0.0375**         0.0126         0.00527         0.0273           sector         0.0167         0.0156         0.00247         0.0110         0.01291         0.0210         0.02320         0.03230         0.03230         0.03230           gender         0.0144         0.0161         0.00437         0.0111         0.0113         0.02321         0.02320         0.02370         0.02320         0.02320         0.02370         0.0132         0.02320         0.02320         0.02370         0.0141         0.00237         0.0132         0.02370         0.0143         0.02320         0.02320         0.02370         0.0141         0.00232         0.02320         0.02310         0.0141         0.00320         0.02310         0.0141         0.00320         0.0231         0.0161         0.0161         0.0161         0.0161         0.0161         0.0231         0.0162         0.0331         0.0162         0.0331         0.0162         0.0332         0.02321         0.0232         0.0232         0.0232 <th< td=""><td>position</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>  | position           |          |          |          |          |          |          |          |          |
| 0.0423   0.0404   0.0239   0.0286   0.0187   0.0401   0.02091   0.0400   | companysize        |          | , ,      |          | ,        |          |          |          |          |
|  | 1 2                |          | (0.0404) | (0.0239) | (0.0286) | (0.0187) | (0.0401) | (0.0391) | (0.0400) |
| sector         -0.0167         -0.0156         -0.0247         0.0161         9.97-05         -0.0149         -0.0190         -0.0142           gender         (0.025)         (0.0240)         (0.0142)         (0.0171)         (0.0101)         (0.0237)         (0.0237)         (0.0237)           ceatat         (0.0113)         (0.018)         (0.0464)         (0.0767)         (0.0501)         (0.107)         (0.0100)         (0.0100)         (0.0100)         (0.0569)         (0.0767)         (0.0350)         (0.0757)         (0.0385)         (0.021)         (0.0569)         (0.0771)         (0.0385)         (0.021)         (0.0569)         (0.0771)         (0.0385)         (0.021)         (0.0569)         (0.0771)         (0.0385)         (0.021)         (0.0569)         (0.0772)         (0.0385)         (0.021)         (0.011)         (0.0569)         (0.0160)         (0.0141)         (0.0321)         (0.0141   | companyage         |          |          |          |          |          |          |          |          |
| gender         (0.0252)         (0.024)         (0.0142)         (0.011)         (0.0137)         (0.0237)         (0.0237)         (0.0237)         (0.0237)         (0.0237)         (0.0237)         (0.0237)         (0.0131)         (0.0040)         (0.0077)         (0.001)         (0.0050)         (0.0040)         (0.0077)         (0.001)         (0.0050)         (0.0073)         (0.0849)         (0.0849)         (0.0849)         (0.0849)         (0.0849)         (0.0849)         (0.0849)         (0.0849)         (0.0859)         (0.0849)         (0.0859)         (0.0849)         (0.0859)         (0.0849)         (0.0859)         (0.0849)         (0.0859)         (0.0849)         (0.0859)         (0.0849)         (0.0859)         (0.0849)         (0.0859)         (0.0849)         (0.0859)         (0.0849)         (0.0859)         (0.0849)         (0.0859)         (0.0849)         (0.0859)         (0.0869)         (  | sector             | ,        |          |          |          |          |          |          |          |
| gender         0.194*         -0.161         -0.0433         -0.0118         -0.0261         -0.135         -0.0959         -0.146           ceaut         (0.689***)         0.630***         0.241***         0.554***         0.293***         0.751***         0.584**         0.584***         0.503***         0.503***         0.503***         0.503***         0.503***         0.524**         0.066***         0.144***         0.933**         0.503***         0.524**         0.043**         0.048**         0.936***         0.936***         0.036***         0.028**           cerisk         0.169**         0.117**         0.061**         0.043**         0.045**         0.034**         0.045**         0.038**           cerisk         0.214***         0.083**         0.214***         0.044**         0.046***         0.052**         0.038***         0  | Sector             |          |          |          |          |          |          |          |          |
| ceatt         0.689***         0.630***         0.241***         0.554***         0.293***         0.573***         0.571***         0.584***           cetime         (0.0569)         (0.0717)         (0.0321)         (0.0385)         (0.0207)         (0.0870)         (0.0870)         (0.0870)         (0.0850)           cetime         (0.0977)         (0.101)         (0.0552)         (0.0661)         (0.061)         (0.0432)         (0.131)         (0.150)         (0.126)           cems         (1.367***)         (1.582***)         0.0871         (0.0661)         (0.0432)         (0.131)         (0.130)         (0.208)           cereward         (0.129)         (0.166)         (0.0861)         (0.013)         (0.0673)         (0.217)         (0.237)         (0.208)           cereward         (0.109)         (0.117)         (0.0614)         (0.0738)         (0.0480)         (0.0480)         (0.127)         (0.327)         (0.238)           cerisk         (0.130)         (0.214**         (0.148)         (0.148)         (0.148)         (0.148)         (0.148)         (0.227)         (0.338)           cerisk         (0.083)         (0.248)         (0.248)         (0.224)         (0.450)         (0.464)         (0.450)  | gender             |          |          |          |          |          | ,        |          |          |
| cetime         (0.0569)         (0.071)         (0.0321)         (0.0251)         (0.0870)         (0.0874)         (0.0889)           cetime         -0.289***         -0.506***         0.327***         -0.191**         0.164**         -0.323**         -0.793***         -0.503***           cems         1.367***         1.582***         -0.0871         0.0166**         0.147**         1.193***         1.812***         1.500***           cereward         (0.152)         0.166*         (0.0861)         0.013**         0.021**         1.037**         1.016**           cereward         (0.109)         0.117*         (0.0614)         0.0735*         0.0480*         0.145**         0.936***         -0.106**           cerinov         1.523***         1.000**         0.0735*         0.0480*         0.145**         1.016***           cerinov         1.253***         1.245**         1.245**         1.245**         1.035**         1.034**         1.029**           cerinsk         0.214***         1.245**         1.245**         1.245**         1.245**         1.245**         1.245**         1.245**         1.245**         1.245**         1.245**         1.245**         1.245**         1.245**         1.245**         1.245**  |                    |          |          |          |          |          |          |          | . ,      |
| cetime         -0.289**         -0.506***         0.327***         -0.191***         0.164***         -0.323**         -0.793***         -0.508***           cems         1.367***         1.582**         -0.807*         0.166***         0.147**         1.193***         1.812***         1.500***           cereward         -0.929***         -1.060***         0.0824*         -0.103**         0.047**         -1.03***         0.926***         -0.237*         0.0280*           cereward         -0.929***         -1.060***         0.024*         -0.043**         0.043**         0.043**         0.936**         -0.101**           coinnov         (0.109)         0.117*         (0.061**)         0.073**         0.044**         0.145**         0.124**         0.124**           corisk         0.214**         -         -         0.038**         -         1.666***         0.124**         0.129**           corisk         0.214**         -         -         -         0.038**         0.046**         0.029**           corporat         1.636***         1.436***         -         -         0.046**         0.046**         0.150**           fear         1.024***         -         -         -         -  | ceaut              |          |          |          |          |          |          |          |          |
| cems         (0.0977)         (0.101)         (0.0525)         (0.066)         (0.0432)         (0.131)         (0.150)         (0.152)         (0.166)         (0.0861)         (0.0673)         (0.173)         (0.237)         (0.0868)         (0.103)         (0.0673)         (0.217)         (0.237)         (0.0808)           cereward         0.929***         -1.060***         0.0524         -0.474***         -0.104**         -0.968***         -0.936***         -1.016***           coinnov         (0.109)         (0.117)         (0.0614)         (0.0480)         (0.048)         (0.168)         (0.141)**           coinnov         (0.132)         (0.133)         (0.0480)         (0.148**         1.164***           coinnov         (0.2438)         (0.243**)         (0.349)         (0.349)         (0.349)         (0.349)         (0.349)         (0.349)         (0.349)         (0.085)         (0.085)         (0.085)         (0.085)         (0.085)         (0.085)         (0.085)         (0.085)         (0.040)         (0.040)         (0.040)         (0.040)         (0.040)         (0.040)         (0.040)         (0.040)         (0.040)         (0.040)         (0.040)         (0.040)         (0.040)         (0.040)         (0.040)         (0.040)   | cetime             |          |          |          |          |          |          |          |          |
| cems         1.367***         1.582***         -0.0871         0.616***         0.147**         1.193***         1.812***         1.500***           cereward         (0.152)         (0.166)         (0.0861)         (0.033)         (0.027)         (0.237)         (0.109)         (0.117)         (0.0614)         (0.047**         -0.104**         -0.968***         -0.936***         -1.016***           coinnov         1.523***         1.523***         1.523***         1.523***         1.745***         1.635***         1.745***           coinsk         0.214**         1.523***         1.745***         1.635***         1.745***         1.745***           corisk         0.214**         1.633**         1.523***         1.745***         1.753***         1.752***         1.752***         1.745***         1.753***         1.755***         1.754***         1.753***         1.753***         1.753***         1.754***         1.754***         1.754***  | cemie              |          |          |          |          |          |          |          |          |
| cereward         -0.929*** - 1.066***   0.0524   -0.474***   -0.104**   -0.968***   -0.936***   -0.101***     -0.010**   -0.010**     -0.010**     -0.010**     -0.010**     -0.010**     -0.010**     -0.010**     -0.010**     -0.010**     -0.010**   -0.010**     -0.010**     -0.010**   -0.010**     -0.010**   -0.010**     -0.010**   -0.010**     -0.010**   -0.010**     -0.010** | cems               |          |          |          |          |          |          |          |          |
| 0.109   0.117   0.0614   0.0735   0.0480   0.145   0.169   0.141   |                    |          |          |          |          |          |          |          |          |
| coinnov         1.523***         1.867***         1.635***         1.745***           (0.338)         (0.349)         (0.327)         (0.335)           corisk         0.214**         0.135         0.349***         0.129           coproact         -1.463***         -1.764***         -1.764***         -1.550***           fear         0.396***         (0.450)         (0.450)         (0.450)           fear         0.396***         (0.131)         (0.446)         (0.450)           ceaut_fear         0.207**         (0.0979)  | cereward           |          |          |          |          |          |          |          |          |
| corisk         0.214**         0.135         0.349***         0.129           coproact         -1.463***         0.185         0.349***         0.129           coproact         -1.463***         -1.764***         -1.763***         -1.50***           fear         0.396***         0.463)         (0.446)         (0.450)           fear         0.396***         0.0131         0.446)         (0.450)           ceaut_fear         0.207**         0.0979         0.0977         0.0160         0.0160         0.0160         0.0160         0.0160         0.0160         0.0160         0.0160         0.0160         0.0160         0.0160         0.0180         0.0180         0.0180         0.0180         0.0160         0.0180         0.0180         0.0180         0.0180         0.0180         0.0180         0.0180         0.0180         0.0180         0.0180         0.0180         0.0180         0.0160         0.0160         0.0160         0.016  | eoinnov            | (0.109)  |          | (0.0614) | (0.0/33) | (0.0480) |          |          |          |
| corisk         0.214**         0.135         0.349***         0.129           coproact         -1.463***         -1.764***         -1.764***         -1.503***         -1.50***           fear         (0.457)         (0.463)         (0.446)         (0.459)           fear         0.396***         (0.131)         (0.207**         (0.120)           ceaut_fear         0.207**         (0.0979)         (0.0979)         (0.0979)         (0.090)         (0.090)         (0.090)         (0.090)         (0.090)         (0.090)         (0.090)         (0.090)         (0.090)         (0.090)         (0.090)         (0.090)         (0.090)         (0.012)         (0.097)         (0.021)         (0.012)         (0.012)         (0.097)         (0.012)         (0.097)  | Commo              |          |          |          |          |          |          |          |          |
| eoproact       -1.463***       -1.764***       -1.763***       -1.550***         fear       (0.457)       (0.463)       (0.446)       (0.450)         fear       (0.396***       (0.131)       (0.207**       (0.0979)       (0.0979)       (0.0979)       (0.0979)       (0.0979)       (0.0979)       (0.0979)       (0.0979)       (0.0979)       (0.0979)       (0.0979)       (0.0979)       (0.0979)       (0.0970)       (0.0970)       (0.0970)       (0.0970)       (0.0970)       (0.0970)       (0.0970)       (0.0970)       (0.0977)       (0.0971)       (0.0971)       (0.0971)       (0.0971)       (0.0971)       (0.0971)       (0.0971)       (0.0971)       (0.0971)       (0.0971)   | eorisk             |          | 0.214**  |          |          |          | 0.135    | 0.349*** | 0.129    |
| (0.457)  |                    |          |          |          |          |          |          |          |          |
| fear       0.396***         ceaut_fear       (0.131)         ceaut_fear       0.207**         (0.0979)       (0.0979)         cetime_fear       -0.464**         cems_fear       (0.186)         cereward_fear       0.575**         wellbeing       0.499***         ceaut_wellbeing       0.126)         cetime_wellbeing       0.542***         cems_wellbeing       0.186)         cereward_wellbeing       0.542***         cereward_wellbeing       0.0290         cereward_wellbeing       0.57***         hyperactivity       0.557***         ceaut_hyper       0.62*         cetime_hyper       0.62*         cetime_hyper       -0.207  | eoproact           |          |          |          |          |          |          |          |          |
| ceaut_fear       (0.131)         0.207**       (0.0979)         cetime_fear       -0.464**         cems_fear       (0.186)         cereward_fear       (0.310)         cereward_fear       -0.0590         wellbeing       (0.126)         ceaut_wellbeing       (0.126)         cetime_wellbeing       (0.106)         cems_wellbeing       0.542***         cems_wellbeing       -0.406         cereward_wellbeing       -0.0872         (0.290)       (0.290)         cereward_wellbeing       0.557***         hyperactivity       0.557***         ceaut_hyper       (0.162*         cetime_hyper       -0.207  | fear               |          | (0.437)  |          |          |          | . ,      | (0.440)  | (0.430)  |
| cetime_fear       (0.0979)         cetime_fear       -0.464**         (0.186)       (0.275**         cereward_fear       0.575*         cereward_fear       0.0310)         wellbeing       0.499***         (0.126)       (0.126)         ceaut_wellbeing       0.542***         cetime_wellbeing       0.186)         cems_wellbeing       0.186)         cems_wellbeing       0.290)         cereward_wellbeing       0.557***         hyperactivity       0.557***         ceaut_hyper       0.162*         cetime_hyper       -0.207  |                    |          |          |          |          |          |          |          |          |
| cetime_fear       -0.464**         cems_fear       0.575*         cereward_fear       (0.310)         cereward_fear       0.499***         wellbeing       (0.126)         ceaut_wellbeing       -0.402***         cetime_wellbeing       (0.186)         cems_wellbeing       (0.186)         cems_wellbeing       (0.290)         cereward_wellbeing       -0.406         hyperactivity       0.557***         ceaut_hyper       (0.121)         cetime_hyper       -0.207   | ceaut_fear         |          |          |          |          |          |          |          |          |
| cems_fear       (0.186)         cereward_fear       0.575*         wellbeing       0.499***         ceaut_wellbeing       (0.126)         cetime_wellbeing       0.402***         cems_wellbeing       0.542***         cems_wellbeing       0.186)         cereward_wellbeing       0.290         cereward_wellbeing       0.557***         hyperactivity       0.557***         ceaut_hyper       0.162*         (0.0977)       0.162*         (0.0977)       0.207  | actima foor        |          |          |          |          |          |          |          |          |
| cems_fear       0.575*   | cetime_rear        |          |          |          |          |          |          |          |          |
| cereward_fear       -0.0590 (0.218)         wellbeing       0.499*** (0.126)         ceaut_wellbeing       -0.402*** (0.106)         cetime_wellbeing       0.542*** (0.186)         cems_wellbeing       -0.406 (0.290)         cereward_wellbeing       -0.0872 (0.208)         hyperactivity       0.557*** (0.121)         ceaut_hyper       0.162* (0.0977)         cetime_hyper       -0.207   | cems fear          |          |          |          |          |          |          |          |          |
| wellbeing 0.499*** ceaut_wellbeing -0.402*** cetime_wellbeing 0.542*** cems_wellbeing 0.542*** cems_wellbeing 0.542** cereward_wellbeing -0.406 cereward_wellbeing -0.0872 cereward_wellbeing 0.557*** ceaut_hyper 0.162* ceaut_hyper 0.162* cetime_hyper -0.207   | _                  |          |          |          |          |          |          |          |          |
| wellbeing       0.499***         ceaut_wellbeing       -0.402***         cetime_wellbeing       0.542***         cems_wellbeing       -0.406         cereward_wellbeing       -0.0872         cereward_wellbeing       0.290)         hyperactivity       0.557***         ceaut_hyper       0.162*         cetime_hyper       -0.207  | cereward_fear      |          |          |          |          |          |          |          |          |
| ceaut_wellbeing       (0.126)         cetime_wellbeing       (0.106)         cems_wellbeing       (0.186)         cers_wellbeing       -0.406         cereward_wellbeing       (0.290)         cereward_wellbeing       -0.0872         hyperactivity       (0.208)         ceaut_hyper       0.162*         cetime_hyper       -0.207   | wellheing          |          |          |          |          |          | (0.218)  | 0.499*** |          |
| ceaut_wellbeing       -0.402***         (0.106)       (0.186)         cems_wellbeing       -0.406         cereward_wellbeing       (0.290)         cereward_wellbeing       -0.0872         hyperactivity       (0.208)         ceaut_hyper       0.162*         cetime_hyper       -0.207   | wellocing          |          |          |          |          |          |          |          |          |
| cetime_wellbeing $0.542***$ (0.186) $(0.186)$ cems_wellbeing $-0.406$ (0.290) $(0.290)$ cereward_wellbeing $(0.208)$ hyperactivity $(0.208)$ ceaut_hyper $(0.121)$ cetime_hyper $(0.0977)$ cetime_hyper $-0.207$   | ceaut_wellbeing    |          |          |          |          |          |          |          |          |
| (0.186) cems_wellbeing (0.290) cereward_wellbeing (0.290) hyperactivity (0.208) hyperactivity (0.121) ceaut_hyper (0.0977) cetime_hyper  |                    |          |          |          |          |          |          |          |          |
| cems_wellbeing       -0.406 (0.290)         cereward_wellbeing       -0.0872 (0.208)         hyperactivity       (0.208)         ceaut_hyper       0.162* (0.0977)         cetime_hyper       -0.207   | cetime_wellbeing   |          |          |          |          |          |          |          |          |
| (0.290) cereward_wellbeing  (0.290) -0.0872 (0.208)  hyperactivity  (0.121) ceaut_hyper  (0.121) cetime_hyper  cetime_hyper  (0.0977) -0.207   | cems wellheing     |          |          |          |          |          |          |          |          |
| hyperactivity  0.557***  (0.121)  ceaut_hyper  0.162*  (0.0977)  cetime_hyper  -0.207  | cems_werroemg      |          |          |          |          |          |          |          |          |
| hyperactivity 0.557***  ceaut_hyper 0.162* cetime_hyper -0.207   | cereward_wellbeing |          |          |          |          |          |          | -0.0872  |          |
| (0.121) ceaut_hyper 0.162* (0.0977) cetime_hyper -0.207  | 4                  |          |          |          |          |          |          | (0.208)  | 0.555444 |
| ceaut_hyper       0.162*         (0.0977)       (0.0977)         cetime_hyper       -0.207   | nyperactivity      |          |          |          |          |          |          |          |          |
| (0.0977) cetime_hyper -0.207   | ceaut hyper        |          |          |          |          |          |          |          |          |
| = *1   |                    |          |          |          |          |          |          |          |          |
| (0.184)  | cetime_hyper       |          |          |          |          |          |          |          | -0.207   |
| 0.000  | 1                  |          |          |          |          |          |          |          |          |
| cems_hyper -0.223 (0.309)  | cems_nyper         |          |          |          |          |          |          |          |          |
| cereward_hyper 0.195   | cereward_hyper     |          |          |          |          |          |          |          |          |

|              |         |         |         |         |         |         |         | (0.230) |
|--------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Constant     | -0.291  | -0.131  | -0.388* | 0.267   | -0.256  | -0.480  | -0.317  | -0.568  |
|              | (0.383) | (0.367) | (0.216) | (0.259) | (0.169) | (0.389) | (0.363) | (0.375) |
| Observations | 469     | 469     | 469     | 469     | 469     | 469     | 469     | 469     |
| R-squared    | 0.491   | 0.542   | 0.490   | 0.445   | 0.566   | 0.562   | 0.577   | 0.566   |

Appendix J. Robustness Check with OC as Dependent Variable for Work Experience > 1

| VARIABILES         Oc         oc         coinnow         coinsk         coproact         oc         oc         oc           age         0.0623*         0.0122         -0.0409         0.0372         -0.0332         0.0238         0.00854         0.0238           education         -0.157***         -0.132***         0.0172         (0.0358)         (0.0599)         (0.0509)         (0.0406)         (0.0463)         (0.0496)         (0.0496)           workexp         -0.0660*         -0.0365         0.0414         -0.0688**         0.0273         -0.0211         -0.0299         -0.0298           workexp         -0.0660*         -0.0365         0.0431         -0.088**         -0.0673         -0.0211         -0.0299         -0.0299         0.0234         (0.0213)         (0.0234)         (0.0316)         -0.0272         (0.0238)         (0.0416)         -0.0373         -0.0271         -0.0204         -0.0320         0.0238         -0.00734         -0.0208         -0.0171         -0.0208         -0.0071         -0.0208         -0.00734         -0.0208         -0.0171         -0.0208         -0.0171         -0.0208         -0.018         -0.011         -0.0208         -0.011         -0.0208         -0.011         -0.0208         -0.011  |                                       | (1)       | (2)       | (3)      | (4)       | (5)      | (6)      | (7)       | (8)       |
|--|---------------------------------------|-----------|-----------|----------|-----------|----------|----------|-----------|-----------|
| Colucation   Column   | VARIABLES                             |           |           |          |           |          |          |           |           |
| Colucation   Column   |                                       |           |           |          |           |          |          |           |           |
| education  | age                                   | 0.0623*   | 0.0122    | -0.0409  | 0.0397    | -0.0332  | 0.0238   | 0.00854   | 0.0238    |
| workexp  |                                       | (0.0368)  | (0.0321)  |          | (0.0332)  | (0.0217) | (0.0287) | (0.0311)  | (0.0274)  |
| workexp         -0.0606*         -0.03050         0.00431         -0.068**         0.0273         -0.0221         -0.0179         -0.0201         con211         -0.0204         0.0310         0.02229         0.02289*         -0.0211         0.0204         0.0271           tenure         -0.0271         -0.0204         0.0220         0.0259         0.0288*         -0.00754         -0.0206         -0.0177           (0.0269)         (0.0234)         (0.02017)         -0.00676         -0.0076*         -0.0338           (0.0515)         (0.0446)         (0.0388)         (0.0441)         (0.0303)         (0.0401)         (0.0441)         (0.0385)           companysize         -0.0478         -0.023         0.0399         -0.0102         0.0218         -0.0127         -0.027         -0.027         -0.023           companyage         -0.0327         -0.0036         0.0480**         0.00324         0.0187         0.0040         0.0172         0.0180         0.00256         0.0338           companyage         -0.0026         -0.0316         -0.0227         0.0191         0.0229         0.0180         0.0267         0.0229         0.0116         0.0256         0.0017         0.0619         0.0119         0.0229         0.0183 <td>education</td> <td>-0.157***</td> <td>-0.132***</td> <td>0.0170</td> <td>-0.0442</td> <td>0.00558</td> <td></td> <td>-0.111**</td> <td>-0.0959**</td>   | education                             | -0.157*** | -0.132*** | 0.0170   | -0.0442   | 0.00558  |          | -0.111**  | -0.0959** |
| tenure   |                                       | (0.0587)  | (0.0509)  | (0.0442) |           | (0.0346) | (0.0463) | (0.0496)  | (0.0434)  |
| tenure   | workexp                               | -0.0606*  |           | 0.0431   | -0.0688** | 0.0273   | -0.0221  | -0.0179   | -0.0298   |
| position         (0.0269)         (0.0234)         (0.0240)         (0.0213)         (0.0211)         (0.027)         (0.0300)           position         -0.104**         -0.108**         -0.00812         -0.00276         -0.00760         -0.0070*         -0.0338           companysize         -0.0478         -0.0233         0.0397*         -0.0102         0.0281         -0.0145         -0.0207         -0.0192           companyage         -0.0327         -0.0936         0.0480*         -0.0032         0.0375**         0.00540         0.00246         -0.0192           sector         (0.0254)         (0.0222)         (0.0191)         (0.0290)         (0.0100)         (0.0200)         (0.0119           gender         (0.0189)         (0.0164)         (0.0143         (0.0111)         (0.0111)         (0.0147)         (0.0188)         (0.0111)           gender         (0.0189)         (0.0143)         (0.0143)         (0.0181)         (0.0111)         (0.0111)         (0.0147)         (0.0189)           gender         (0.0189)         (0.0543)         (0.0143)         (0.0143)         (0.0181)         (0.0111)         (0.0111)         (0.0117)         (0.0123)           ceaut         (0.0189)         (0.0543) <td< td=""><td></td><td>(0.0361)</td><td>(0.0316)</td><td>(0.0272)</td><td>(0.0325)</td><td>(0.0213)</td><td>(0.0284)</td><td>(0.0312)</td><td>(0.0271)</td></td<>  |                                       | (0.0361)  | (0.0316)  | (0.0272) | (0.0325)  | (0.0213) | (0.0284) | (0.0312)  | (0.0271)  |
| position         -0.104**         -0.108**         -0.00812         -0.00217         -0.00766         -0.0709*         -0.081*         -0.0385           companysize         -0.0178         (0.0515)         (0.0446)         (0.0388)         (0.0401)         (0.0401)         (0.0411)         (0.0385)           companysize         -0.0178         -0.0253         (0.039*)         (0.0280)         (0.0187)         (0.0249)         (0.0267)         (0.0237)         -0.0192           companyage         -0.037         -0.0096         (0.0848)         (0.0187)         (0.0249)         (0.0249)         (0.0249)         (0.0260)         (0.0234)         -0.00172           sector         (0.0254)         (0.0222)         (0.0111)         (0.0111)         (0.0111)         (0.0114)         (0.0194)           gender         -0.0208         -0.0205         -0.0433         -0.0116         -0.02611         (0.0111)  | tenure                                | -0.0271   |           | 0.0320   | 0.0259    | 0.0288*  | -0.00754 | -0.0206   | -0.0177   |
| Companysize  |                                       | (0.0269)  | (0.0234)  | (0.0202) | (0.0243)  | (0.0158) | (0.0211) | (0.0227)  | (0.0200)  |
| Companysize  | position                              | -0.104**  | -0.108**  | -0.00812 | -0.00217  | -0.00676 | -0.0709* | -0.0801*  | -0.0338   |
| companyage         (0.0317)         (0.0278)         (0.0289)         (0.0287)         (0.0237)         (0.0237)         (0.02937)         (0.0237)         (0.0237)         (0.0237)         (0.0237)         (0.0204)         (0.0223)         (0.0172)         (0.0172)         (0.0117)         (0.0150)         (0.0200)         (0.0218)         (0.0117)           sector         (0.0189)         (0.0164)         (0.0122)         (0.0111)         (0.0111)         (0.0147)         (0.0188)         (0.0101)         (0.0111)         (0.0147)         (0.0189)         (0.0142)         (0.0171)         (0.0111)         (0.0147)         (0.0189)         (0.0142)         (0.0171)         (0.0111)         (0.0147)         (0.0163)         (0.0173)         (0.0600)         (0.0767)         (0.0501)         (0.0622)         (0.0716)         (0.0282)           ceaut         (0.0427)         (0.0490)         (0.0321)         (0.0385)         (0.0251)         (0.0540)         (0.0793)         (0.0509)           cetime         (0.0427)         (0.0490)         (0.0521)         (0.0611)         (0.0432)         (0.0814)         (0.0793)         (0.0601)         (0.0432)         (0.0814)         (0.0793)         (0.0814)         (0.0793)         (0.0814)         (0.0162)         (0.0163)  | •                                     | (0.0515)  | (0.0446)  | (0.0388) | (0.0464)  | (0.0303) | (0.0401) | (0.0441)  | (0.0385)  |
| companyage         (0.0317)         (0.0278)         (0.0289)         (0.0287)         (0.0237)         (0.0237)         (0.02937)         (0.0237)         (0.0237)         (0.0237)         (0.0237)         (0.0204)         (0.0223)         (0.0172)         (0.0172)         (0.0117)         (0.0150)         (0.0200)         (0.0218)         (0.0117)           sector         (0.0189)         (0.0164)         (0.0122)         (0.0111)         (0.0111)         (0.0147)         (0.0188)         (0.0101)         (0.0111)         (0.0147)         (0.0189)         (0.0142)         (0.0171)         (0.0111)         (0.0147)         (0.0189)         (0.0142)         (0.0171)         (0.0111)         (0.0147)         (0.0163)         (0.0173)         (0.0600)         (0.0767)         (0.0501)         (0.0622)         (0.0716)         (0.0282)           ceaut         (0.0427)         (0.0490)         (0.0321)         (0.0385)         (0.0251)         (0.0540)         (0.0793)         (0.0509)           cetime         (0.0427)         (0.0490)         (0.0521)         (0.0611)         (0.0432)         (0.0814)         (0.0793)         (0.0601)         (0.0432)         (0.0814)         (0.0793)         (0.0814)         (0.0793)         (0.0814)         (0.0162)         (0.0163)  | companysize                           | -0.0478   | -0.0253   | 0.0397*  | -0.0102   | 0.0281   | -0.0145  | -0.0207   | -0.0192   |
| companyage         -0.0327         -0.00936         0.0480**         0.00323         0.0375**         0.00540         0.00172         (0.0119)         (0.0229)         (0.019)         (0.0200)         (0.0200)         (0.0218)         (0.0191)         sector         (0.00256         -0.00316         -0.00247         0.01161         -9.97e-05         0.00364         -0.00388         0.00317           gender         -0.0208         -0.0205         -0.0453         -0.01118         -0.0201         0.0356         -0.00179         0.0205           ceaut         -0.2018         -0.0205         -0.0453         -0.0118         -0.0261         0.0356         -0.00179         0.0205           ceaut         -0.210***         -0.263****         0.241***         0.5554***         0.293***         -0.288***         -0.179***         -0.358***         0.0210***         0.0520         0.0535         (0.0501)         (0.0540)         (0.0569)         0.0552         0.0610         0.0521         0.0687         0.023***         -0.191***         0.164***         -0.288***         -0.1793         0.0521         0.0661         0.0521         0.0661**         0.043**         0.0814         0.0121         0.021**         0.021**         0.021**         0.021**         0.021**   |                                       | (0.0317)  | (0.0276)  | (0.0239) | (0.0286)  | (0.0187) | (0.0249) | (0.0267)  | (0.0237)  |
| sector         (0.0254)         (0.0222)         (0.0191)         (0.0229)         (0.0150)         (0.0200)         (0.0188)         (0.0191)           gender         (0.0189)         (0.0164)         (0.0142)         (0.0111)         (0.0111)         (0.0147)         (0.0185)         (0.0140)           gender         (0.0850)         (0.0737)         (0.0640)         (0.077)         (0.0501)         (0.0662)         (0.0170)         (0.0205)           ceaut         (0.0127)***         (0.0231)         (0.0147)         (0.0662)         (0.0716)         (0.0622)           ceaut         (0.0427)         (0.0490)         (0.0311)         (0.0580)         (0.0737)         (0.0640)         (0.0751)         (0.0662)         (0.0716)         (0.0628)           cetime         (0.0687)         (0.0427)         (0.0424)         (0.0385)         (0.0211)         (0.0540)         (0.0596)         (0.0599)           cetime         (0.0687)         (0.0672)         (0.0211)         (0.0432)         (0.0814)         (0.012)         (0.0798)           cetime         (0.114)         (0.113)         (0.0581)         (0.0421)         (0.0421)         (0.0814)         (0.0798)           cereward         (0.0815)         (0.0798)  | companyage                            |           |           |          |           |          |          |           |           |
| sector         0.00256 (0.0189)         0.00164 (0.0142)         0.0116 (0.0142)         0.0111 (0.0111)         0.00364 (0.0388)         0.00317 (0.0188)         0.00317 (0.0189)         0.00149 (0.0142)         0.0111 (0.0111)         0.00364 (0.0356)         0.00179 (0.0205)         0.00205 (0.0366)         0.00179 (0.0205)         0.00205 (0.0366)         0.00179 (0.0205)         0.00205 (0.0216)         0.00366 (0.0716)         0.00205 (0.0205)         0.00205 (0.0216)         0.00360 (0.0716)         0.00205 (0.0205)         0.00205 (0.0216)         0.00360 (0.0716)         0.00205 (0.0206)         0.00205 (0.0201)         0.00620 (0.0716)         0.00205 (0.0203)         0.00205 (0.0231)         0.00330 (0.0231)         0.0038**         0.0231**         0.00331 (0.0388)         0.00211 (0.0388)         0.00310 (0.0593)         0.00521 (0.0388)         0.00311 (0.0381)         0.00611 (0.0342)         0.00414 (0.012)         0.00733 (0.0733)         0.00631 (0.0532)         0.00611 (0.0332)         0.00814 (0.0342)         0.00414 (0.012)         0.00722***         0.0224***         0.021***         0.0224***         0.021***         0.00733 (0.0733)         0.0061**         0.014***         0.014**         0.014**         0.0155 (0.0148)         0.014**         0.0155 (0.0148)         0.014**         0.023***         0.023***         0.024***         0.024***         0.024****         0.024***         0.024***   | 1 7 6                                 |           |           | (0.0191) |           | (0.0150) |          | (0.0218)  |           |
| gender         (0.0189)         (0.0164)         (0.0142)         (0.0171)         (0.0111)         (0.0147)         (0.0158)         (0.0140)           ceaut         -0.0208         -0.0205         -0.0453         -0.0118         -0.0261         0.0356         -0.0119         0.06501         (0.0662)         (0.0716)         (0.0628)           ceaut         -0.210***         -0.263***         0.241***         0.554***         0.293***         -0.288***         -0.179***         -0.358****           cetime         -0.0687         0.0672         0.0327***         -0.0118**         0.01650         (0.0906)         -0.0793           cetime         -0.0687         0.0672         0.021***         0.0114**         0.0165         0.0906         -0.0793           cetime         -0.0687         0.0622*         -0.0810         0.0432         0.0814         0.0120         0.0745           cems         1.122***         1.052***         -0.0871         0.616***         0.147**         0.722***         0.924**         -0.256***           cereward         0.045***         0.0524         -0.474***         -0.104**         -0.378***         -0.294***         -0.256***           eorisk         0.6081**         0.6089**   | sector                                |           |           |          |           |          |          |           |           |
| gender         -0.0208         -0.0205         -0.0433         -0.0118         -0.0261         0.0356         -0.00179         0.0205           ceaut         (0.0850)         (0.0737)         (0.0640)         (0.0767)         (0.0501)         (0.0622)         (0.0716)         (0.0628)           ceaut         (0.21)***         -0.263***         -0.554***         -0.288***         -0.179***         -0.358***           cetime         (0.0427)         (0.0490)         (0.0321)         (0.0385)         (0.0251)         (0.0540)         (0.0596)         (0.0599)           cetime         (0.0733)         (0.0662)         (0.0713)         (0.0552)         (0.0614)         (0.0156)         (0.0906)         -0.0793           cems         1.122***         1.052***         -0.0871         0.0661***         0.147***         0.722***         0.924***         0.621***           cereward         (0.645****         -0.563***         -0.052**         -0.104**         0.135)         (0.162)         (0.123)           ceinnov         (0.862***         -0.052**         -0.044***         -0.14**         -0.132*         0.21**         (0.217)         (0.231)         (0.073**         (0.0432)         0.052**         0.052**         0.052**   |                                       |           |           |          |           |          |          |           |           |
| Composition  | gender                                | ,         |           |          |           |          |          |           |           |
| ceaut         -0.210***         -0.263***         0.241***         0.554***         0.293***         -0.288***         -0.179***         -0.358***           cetime         -0.0467         (0.0490)         (0.0321)         (0.0385)         (0.0251)         (0.0540)         (0.0596)         (0.0509)           cetime         -0.0687         0.0673         (0.0693)         (0.0552)         (0.0661)         (0.0432)         (0.0814)         (0.102)         (0.0745)           cems         1.122***         1.052***         -0.0871         0.616***         0.147**         0.722***         0.621***         0.621***           cereward         -0.645***         -0.563***         0.0524         -0.474***         -0.10673         (0.155)         (0.162)         (0.123)           cerinov         0.0815)         (0.0798)         (0.0614)         (0.0735)         (0.0480)         (0.0899)         (0.115)         (0.0832)           cerinov         0.862***         0.0231)         0.0731         (0.0480)         (0.0899)         (0.115)         (0.0812)           cerisk         0.660***         0.0231         0.050***         0.500***         0.500***         0.500***         0.500***         0.747***           ceaut_fear <t< td=""><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>  | 8                                     |           |           |          |           |          |          |           |           |
| cetime         (0.0427)         (0.0490)         (0.0321)         (0.0385)         (0.0251)         (0.0540)         (0.0596)         (0.0599)           cetime         -0.0687         0.0672         0.327***         -0.191***         0.164***         -0.0165         0.0906         -0.0793           cems         1.122***         1.052***         -0.0871         0.616***         0.147**         0.722***         0.924***         0.621***           cereward         (0.114)         (0.113)         (0.0861)         (0.103)         (0.0673)         (0.135)         (0.162)         (0.213)           cereward         -0.645***         -0.563***         0.0524         -0.474***         -0.104**         -0.294**         -0.256***           coinnov         0.862***         (0.0735)         (0.0480)         (0.0899)         (0.115)         (0.0835)         (0.0815)         (0.0823)         (0.0823)         (0.0815)         (0.0824)         (0.0816)         (0.0816)         (0.0816)         (0.0816)         (0.0816)         (0.0816)         (0.0816)         (0.0816)         (0.0816)         (0.0816)         (0.0816)         (0.0816)         (0.0816)         (0.0816)         (0.0816)         (0.0816)         (0.0816)         (0.0816)         (0.0816)   | ceaut                                 | ,         | ,         |          | ,         |          |          |           |           |
| cetime         -0.0687         0.0672         0.327***         -0.191***         0.164***         -0.0165         0.0906         -0.0793           cems         (0.0733)         (0.0693)         (0.0552)         (0.0661)         (0.0432)         (0.0814)         (0.102)         (0.0745)           cems         1.122***         1.052***         -0.0871         0.616***         0.174*         0.722***         0.924***         0.621***           cereward         -0.645***         -0.563***         0.0524         -0.474***         -0.104**         -0.378***         -0.294**         -0.256***           coinnov         0.862**         0.0614         (0.0735)         (0.0480)         (0.0899)         (0.115)         (0.0822)           coinnov         0.862**         0.0660***         1.133***         0.861***         1.136***           corisk         0.660***         0.0524         0.040*         0.0858)         0.0512           coproact         1.780***         0.0512         0.0858)         0.0512           ceaut_fear         0.312         0.342**         0.0816         0.0816           ceaut_fear         0.041***         0.041***         0.0116         0.0115           cereward_fear         0  |                                       |           |           |          |           |          |          |           |           |
| cems         (0.0733)         (0.0693)         (0.0552)         (0.0661)         (0.0432)         (0.0814)         (0.102)         (0.0745)           cereward         (0.114)         (0.113)         (0.0861)         (0.061***         0.147**         0.722***         0.924***         0.621***           cereward         (0.645**         -0.563**         (0.0851)         (0.0798)         (0.0614)         (0.0735)         (0.0480)         (0.0899)         (0.115)         (0.0832)           eoinnov         (0.0815)         (0.0798)         (0.0614)         (0.0735)         (0.0480)         (0.0899)         (0.115)         (0.0832)           eoinnov         (0.862**         (0.0512)         (0.0480)         (0.0899)         (0.115)         (0.0832)           eorisk         (0.660**         (0.231)         (0.0511)         (0.223)         (0.193)         (0.0512)         (0.0512)         (0.0512)         (0.0538)         (0.0588)         (0.0512)         (0.0512)         (0.0571)         (0.027)         (0.0572)         (0.0512)         (0.054**         (0.054**         (0.0512)         (0.054**         (0.0512)         (0.0512)         (0.054**         (0.0512)         (0.0512)         (0.054**         (0.0512)         (0.0512)         (0.0512)   | cetime                                |           |           |          |           |          |          | ,         |           |
| cems         1.122***         1.052***         -0.0871         0.616***         0.147**         0.722***         0.924***         0.621***           cereward         (0.114)         (0.113)         (0.0861)         (0.103)         (0.0673)         (0.135)         (0.123)         (0.123)         (0.082)         -0.294***         -0.294**         -0.256***         -0.256***         -0.04**         -0.104**         -0.378***         -0.294**         -0.256***         -0.256***         -0.04**         -0.104**         -0.104**         -0.378***         -0.294**         -0.256***         -0.256***         -0.04**         -0.104**         -0.104**         -0.378***         -0.294**         -0.256***         -0.256***         -0.04**         -0.104**         -0.104**         -0.104**         -0.0480         (0.0899)         (0.115)         (0.0832)         (0.0882)         (0.0812)         (0.0816)         -0.576***         0.862***         1.136***         1.136***         1.136***         0.050**         0.594***         1.136***         0.074***         0.050**         0.594***         -1.727***         1.727***         1.727***         1.727***         1.727***         1.727***         1.727***         1.727***         1.727***         1.727***         1.727***         1.727***         1.727***<  | CCLITIC                               |           |           |          |           |          |          |           |           |
| cereward       (0.114)       (0.113)       (0.0861)       (0.103)       (0.0673)       (0.135)       (0.162)       (0.123)         -0.645***       -0.563***       -0.0524       -0.474***       -0.104**       -0.378***       -0.294**       -0.256***         eoinnov       0.862**       (0.0798)       (0.0614)       (0.0735)       (0.0480)       (0.015)       (0.0899)         eoinnov       0.862**       (0.021)       (0.021)       (0.0217)       (0.223)       (0.188)         eorisk       0.660***       (0.0512)       (0.0538)       (0.0588)       (0.0512)         eoproact       -1.780***       (0.0512)       (0.0538)       (0.0588)       (0.0512)         fear       (0.312)       (0.312)       (0.0816)       (0.0816)       (0.241***         ceaut_fear       (0.0816)       (0.0416)       (0.0110)       (0.0115)         cems_fear       (0.010)       (0.0136)       (0.0162)         cems_fear       (0.010)       (0.0136)       (0.0859)         ceaut_wellbeing       -0.0275***       (0.0859)         ceaut_wellbeing       -0.0154       (0.0722)         cetime_wellbeing       -0.162       (0.162)   | cems                                  |           |           |          |           |          |          |           |           |
| cereward       -0.645***       -0.563***       0.0524       -0.474***       -0.104**       -0.378***       -0.294**       -0.256***         coinnov       0.862***       (0.0735)       (0.0480)       (0.0899)       (0.115)       (0.0832)         coinnov       0.862***       (0.231)       (0.217)       (0.223)       (0.198)         corisk       0.660***       0.500***       0.590***       0.594***       0.474***         coproact       -1.780***       0.0538)       (0.0538)       (0.0588)       (0.0512)         coproact       -1.780***       0.241***       -1.727***       (0.0816)       0.241***       -1.727***         fear       0.0468       0.0608       0.241***       0.0608       0.241***       0.0608       0.241***       0.0608  | Como                                  |           |           |          |           |          |          |           |           |
| eoinnov  | cereward                              | ( )       |           |          |           |          |          |           |           |
| eoinnov     0.862***     1.533***     0.861***     1.136***       eorisk     0.660***     0.500***     0.594***     0.474***       eoproact     -1.780***     -2.392***     -1.711***     -1.727***       eoproact     -1.780***     -2.392***     -1.711***     -1.727***       (0.312)     (0.287)     (0.304)     (0.267)       fear     0.784***     (0.0816)       ceaut_fear     0.241***     (0.0608)       cetime_fear     0.110     (0.115)       cems_fear     0.339*     (0.193)       cereward_fear     -0.342**     (0.0859)       wellbeing     -0.0154     (0.0722)       cetime_wellbeing     -0.111     (0.127)       cems_wellbeing     0.162     (0.198)  | cerewara                              |           |           |          |           |          |          |           |           |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$  | eoinnov                               | (0.0013)  |           | (0.0014) | (0.0755)  | (0.0400) |          |           |           |
| corisk       0.660***       0.500***       0.594***       0.474***         (0.0571)       (0.0538)       (0.0588)       (0.0512)         coproact       -1.780***       -2.392***       -1.711***       -1.727***         (0.287)       (0.304)       (0.267)         fear       0.784***       (0.0816)       (0.241***         ceaut_fear       0.241***       (0.0608)       (0.115)         cerms_fear       0.110       (0.115)       (0.193)         cereward_fear       0.339*       (0.193)       (0.0859)         cereward_wellbeing       -0.275***       (0.0859)         ceaut_wellbeing       -0.0154       (0.0722)         cetime_wellbeing       -0.111       (0.127)         cems_wellbeing       0.162       (0.198)   | Commov                                |           |           |          |           |          |          |           |           |
| eoproact -1.780*** -2.392*** -1.711*** -1.727*** (0.312) (0.287) (0.304) (0.267) (0.304) (0.267) (0.312) (0.287) (0.304) (0.267) (0.304) (0.267) (0.304) (0.267) (0.304) (0.267) (0.304) (0.267) (0.304) (0.267) (0.304) (0.267) (0.304) (0.304) (0.267) (0.304) (0.304) (0.267) (0.304) (0.30 | aoristz                               |           |           |          |           |          |          |           |           |
| eoproact -1.780*** -2.392*** -1.711*** -1.727*** (0.312)   | COLISK                                |           |           |          |           |          |          |           |           |
| (0.312) (0.287) (0.304) (0.267) fear (0.0816) ceaut_fear (0.0608) cetime_fear (0.110 (0.115) cems_fear (0.193) cereward_fear (0.136) wellbeing -0.275*** ceaut_wellbeing -0.0154 (0.0722) cetime_wellbeing -0.111 (0.127) cems_wellbeing 0.162 (0.198)   | aannaaat                              |           |           |          |           |          | ,        |           |           |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$  | eoproact                              |           |           |          |           |          |          |           |           |
| ceaut_fear       (0.0816)         0.241***       (0.0608)         cetime_fear       0.110         (0.115)       (0.115)         cems_fear       0.339*         (0.193)       (0.193)         cereward_fear       -0.342**         (0.136)       (0.0859)         ceaut_wellbeing       -0.0154         (0.0722)       (0.0722)         cetime_wellbeing       -0.111         cems_wellbeing       0.162         (0.198)       0.162  | faan                                  |           | (0.312)   |          |           |          |          | (0.304)   | (0.267)   |
| ceaut_fear       0.241***  | rear                                  |           |           |          |           |          |          |           |           |
| cetime_fear       (0.0608)         cems_fear       (0.115)         cereward_fear       (0.193)         cereward_fear       -0.342**         wellbeing       -0.275***         ceaut_wellbeing       -0.0154         cetime_wellbeing       -0.111         cems_wellbeing       0.162         cems_wellbeing       0.162         (0.198)       0.198)   | 4 C                                   |           |           |          |           |          |          |           |           |
| cetime_fear       0.110         (0.115)       (0.115)         cems_fear       0.339*         (0.193)       (0.193)         cereward_fear       (0.136)         wellbeing       -0.275***         (0.0859)       (0.0859)         ceaut_wellbeing       -0.0154         (0.0722)       (0.111)         cems_wellbeing       0.162         (0.198)       (0.198)   | ceaut_lear                            |           |           |          |           |          |          |           |           |
| cems_fear     (0.115)       cereward_fear     (0.193)       wellbeing     -0.342**       ceaut_wellbeing     (0.0859)       ceaut_wellbeing     -0.0154       cetime_wellbeing     -0.111       cems_wellbeing     0.162       cems_wellbeing     0.162       (0.198)  | · · · · · · · · · · · · · · · · · · · |           |           |          |           |          |          |           |           |
| cems_fear       0.339*         (0.193)       -0.342**         (wellbeing       -0.275***         ceaut_wellbeing       (0.0859)         cetime_wellbeing       -0.0154         (0.0722)       (0.0722)         cetime_wellbeing       -0.111         (0.127)       (0.127)         cems_wellbeing       0.162         (0.198)       (0.198)  | cetime_tear                           |           |           |          |           |          |          |           |           |
| cereward_fear       (0.193)         wellbeing       -0.342**         wellbeing       -0.275***         ceaut_wellbeing       (0.0859)         cetime_wellbeing       -0.0154         cetime_wellbeing       -0.111         cems_wellbeing       0.162         (0.198)       (0.198)  | C                                     |           |           |          |           |          | . ,      |           |           |
| cereward_fear       -0.342**   | cems_fear                             |           |           |          |           |          |          |           |           |
| wellbeing -0.275*** (0.0859) ceaut_wellbeing -0.0154 (0.0722) cetime_wellbeing -0.111 (0.127) cems_wellbeing 0.162 (0.198)   | 1.0                                   |           |           |          |           |          |          |           |           |
| wellbeing     -0.275***       (0.0859)     (0.0722)       cetime_wellbeing     -0.111       cems_wellbeing     0.162       (0.198)   | cereward_fear                         |           |           |          |           |          |          |           |           |
| ceaut_wellbeing     (0.0859)       cetime_wellbeing     -0.0154       cetime_wellbeing     -0.111       cems_wellbeing     (0.127)       cems_wellbeing     0.162       (0.198)  |                                       |           |           |          |           |          | (0.136)  | 0.000     |           |
| ceaut_wellbeing       -0.0154         (0.0722)       (0.0722)         cetime_wellbeing       -0.111         (0.127)       (0.127)         cems_wellbeing       0.162         (0.198)       (0.198)   | wellbeing                             |           |           |          |           |          |          |           |           |
| (0.0722) cetime_wellbeing -0.111 (0.127) cems_wellbeing 0.162 (0.198)  |                                       |           |           |          |           |          |          |           |           |
| cetime_wellbeing       -0.111         (0.127)       (0.162         (0.198)       (0.198)   | ceaut_wellbeing                       |           |           |          |           |          |          |           |           |
| (0.127) cems_wellbeing 0.162 (0.198)   |                                       |           |           |          |           |          |          | . ,       |           |
| cems_wellbeing 0.162 (0.198)   | cetime_wellbeing                      |           |           |          |           |          |          |           |           |
| (0.198)  | -                                     |           |           |          |           |          |          |           |           |
|  | cems_wellbeing                        |           |           |          |           |          |          |           |           |
| cereward_wellbeing -0.400***   |                                       |           |           |          |           |          |          |           |           |
|  | cereward_wellbeing                    |           |           |          |           |          |          | -0.400*** |           |

|                |          |          |         |         |         |         | (0.142)  |           |
|----------------|----------|----------|---------|---------|---------|---------|----------|-----------|
| hyperactivity  |          |          |         |         |         |         |          | 0.849***  |
|                |          |          |         |         |         |         |          | (0.0718)  |
| ceaut_hyper    |          |          |         |         |         |         |          | 0.261***  |
|                |          |          |         |         |         |         |          | (0.0578)  |
| cetime_hyper   |          |          |         |         |         |         |          | 0.135     |
| _              |          |          |         |         |         |         |          | (0.109)   |
| cems_hyper     |          |          |         |         |         |         |          | 0.397**   |
|                |          |          |         |         |         |         |          | (0.183)   |
| cereward_hyper |          |          |         |         |         |         |          | -0.366*** |
|                |          |          |         |         |         |         |          | (0.136)   |
| Constant       | 1.127*** | 0.831*** | -0.388* | 0.267   | -0.256  | 0.0624  | 0.886*** | 0.00561   |
|                | (0.287)  | (0.250)  | (0.216) | (0.259) | (0.169) | (0.241) | (0.248)  | (0.222)   |
| Observations   | 469      | 469      | 469     | 469     | 469     | 469     | 469      | 469       |
| R-squared      | 0.325    | 0.497    | 0.490   | 0.445   | 0.566   | 0.602   | 0.537    | 0.642     |

Appendix K. Robustness Check with SE as Dependent Variable for Work Experience > 1

|               | (1)       | (2)        | (3)      | (4)       | (5)       | (6)        | (7)               | (8)        |
|---------------|-----------|------------|----------|-----------|-----------|------------|-------------------|------------|
| VARIABLES     | se        | se         | eoinnov  | eorisk    | eoproact  | se         | se                | se         |
| age           | -0.122*** | -0.0419**  | -0.0409  | 0.0397    | -0.0332   | -0.0424**  | -0.0368*          | -0.0421**  |
| 8-            | (0.0397)  | (0.0203)   | (0.0277) | (0.0332)  | (0.0217)  | (0.0201)   | (0.0198)          | (0.0205)   |
| education     | 0.0801    | 0.0458     | 0.0170   | -0.0442   | 0.00558   | 0.0426     | 0.0533*           | 0.0461     |
|               | (0.0634)  | (0.0322)   | (0.0442) | (0.0530)  | (0.0346)  | (0.0324)   | (0.0316)          | (0.0325)   |
| workexp       | 0.146***  | 0.0600***  | 0.0431   | -0.0688** | 0.0273    | 0.0641***  | 0.0486**          | 0.0608***  |
| •             | (0.0389)  | (0.0200)   | (0.0272) | (0.0325)  | (0.0213)  | (0.0199)   | (0.0199)          | (0.0203)   |
| tenure        | -0.00309  | -0.0392*** | 0.0320   | 0.0259    | 0.0288*   | -0.0411*** | -0.0353**         | -0.0410*** |
|               | (0.0290)  | (0.0148)   | (0.0202) | (0.0243)  | (0.0158)  | (0.0147)   | (0.0145)          | (0.0149)   |
| position      | -0.0270   | -0.0164    | -0.00812 | -0.00217  | -0.00676  | -0.0132    | -0.00126          | -0.0138    |
| •             | (0.0556)  | (0.0282)   | (0.0388) | (0.0464)  | (0.0303)  | (0.0281)   | (0.0281)          | (0.0288)   |
| companysize   | 0.0732**  | 0.0184     | 0.0397*  | -0.0102   | 0.0281    | 0.0121     | 0.0173            | 0.0187     |
| • •           | (0.0343)  | (0.0174)   | (0.0239) | (0.0286)  | (0.0187)  | (0.0174)   | (0.0170)          | (0.0177)   |
| companyage    | 0.0836*** | 0.0198     | 0.0480** | 0.00323   | 0.0375**  | 0.0182     | 0.0145            | 0.0228     |
|               | (0.0274)  | (0.0140)   | (0.0191) | (0.0229)  | (0.0150)  | (0.0140)   | (0.0139)          | (0.0143)   |
| sector        | -0.00876  | -0.00216   | -0.00247 | 0.0116    | -9.97e-05 | -0.00384   | -0.00381          | -0.00174   |
|               | (0.0204)  | (0.0104)   | (0.0142) | (0.0171)  | (0.0111)  | (0.0103)   | (0.0101)          | (0.0105)   |
| gender        | -0.0962   | -0.0568    | -0.0453  | -0.0118   | -0.0261   | -0.0579    | -0.0314           | -0.0591    |
| 6             | (0.0917)  | (0.0466)   | (0.0640) | (0.0767)  | (0.0501)  | (0.0464)   | (0.0456)          | (0.0470)   |
| ceaut         | 0.840***  | 0.635***   | 0.241*** | 0.554***  | 0.293***  | 0.629***   | 0.688***          | 0.646***   |
|               | (0.0461)  | (0.0310)   | (0.0321) | (0.0385)  | (0.0251)  | (0.0378)   | (0.0380)          | (0.0380)   |
| cetime        | -0.00293  | -0.396***  | 0.327*** | -0.191*** | 0.164***  | -0.288***  | -0.516***         | -0.416***  |
|               | (0.0791)  | (0.0438)   | (0.0552) | (0.0661)  | (0.0432)  | (0.0570)   | (0.0651)          | (0.0557)   |
| cems          | -0.244**  | -0.158**   | -0.0871  | 0.616***  | 0.147**   | -0.265***  | -0.0735           | -0.121     |
|               | (0.123)   | (0.0716)   | (0.0861) | (0.103)   | (0.0673)  | (0.0945)   | (0.103)           | (0.0921)   |
| cereward      | 0.0469    | -0.0336    | 0.0524   | -0.474*** | -0.104**  | -0.0550    | -0.00148          | -0.0404    |
| 001011414     | (0.0879)  | (0.0505)   | (0.0614) | (0.0735)  | (0.0480)  | (0.0629)   | (0.0732)          | (0.0622)   |
| eoinnov       | (0.0077)  | 0.0134     | (0.001.) | (0.0755)  | (0.0.00)  | 0.0109     | 0.0591            | 0.0305     |
| Commo         |           | (0.146)    |          |           |           | (0.152)    | (0.142)           | (0.148)    |
| eorisk        |           | -0.550***  |          |           |           | -0.552***  | -0.492***         | -0.548***  |
| COTION        |           | (0.0361)   |          |           |           | (0.0376)   | (0.0374)          | (0.0383)   |
| eoproact      |           | 1.731***   |          |           |           | 1.740***   | 1.609***          | 1.710***   |
| coproact      |           | (0.198)    |          |           |           | (0.201)    | (0.194)           | (0.199)    |
| fear          |           | (0.170)    |          |           |           | 0.000413   | (0.154)           | (0.177)    |
| icai          |           |            |          |           |           | (0.0571)   |                   |            |
| ceaut fear    |           |            |          |           |           | 0.0130     |                   |            |
| ceaut_ieai    |           |            |          |           |           | (0.0425)   |                   |            |
| antima Cana   |           |            |          |           |           | -0.252***  |                   |            |
| cetime_fear   |           |            |          |           |           |            |                   |            |
|               |           |            |          |           |           | (0.0807)   |                   |            |
| cems_fear     |           |            |          |           |           | 0.197      |                   |            |
| 1.0           |           |            |          |           |           | (0.135)    |                   |            |
| cereward_fear |           |            |          |           |           | 0.102      |                   |            |
| 111 :         |           |            |          |           |           | (0.0949)   | 0.000             |            |
| wellbeing     |           |            |          |           |           |            | 0.209*** (0.0547) |            |
|               |           |            |          |           |           |            |                   |            |

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| ceaut_wellbeing           |                      |                   |                    |                  |                   |                   | -0.180***<br>(0.0460) |                              |
|---------------------------|----------------------|-------------------|--------------------|------------------|-------------------|-------------------|-----------------------|------------------------------|
| cetime_wellbeing          |                      |                   |                    |                  |                   |                   | 0.233***              |                              |
| cems_wellbeing            |                      |                   |                    |                  |                   |                   | (0.0809)<br>-0.148    |                              |
| cereward_wellbeing        |                      |                   |                    |                  |                   |                   | (0.126)<br>-0.00622   |                              |
| hyperactivity             |                      |                   |                    |                  |                   |                   | (0.0905)              | 0.0405                       |
| ceaut_hyper               |                      |                   |                    |                  |                   |                   |                       | (0.0537)<br>-0.0189          |
| cetime_hyper              |                      |                   |                    |                  |                   |                   |                       | (0.0432)<br>0.0304           |
| cems_hyper                |                      |                   |                    |                  |                   |                   |                       | (0.0813)<br>-0.0885          |
| cereward_hyper            |                      |                   |                    |                  |                   |                   |                       | (0.137)<br>0.0146            |
| Constant                  | -0.823***<br>(0.310) | -0.228<br>(0.158) | -0.388*<br>(0.216) | 0.267<br>(0.259) | -0.256<br>(0.169) | -0.223<br>(0.169) | -0.289*<br>(0.158)    | (0.102)<br>-0.259<br>(0.166) |
| Observations<br>R-squared | 469<br>0.649         | 469<br>0.910      | 469<br>0.490       | 469<br>0.445     | 469<br>0.566      | 469<br>0.913      | 469<br>0.916          | 469<br>0.911                 |