

**Ph.D. Thesis**

**Investigating the Entrepreneurial Intentions and Action Gap in the Saudi Context**

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## **Abstract**

**Background:** The importance of entrepreneurship for economic development is well-known, and incorporated in reform programs like the Saudi 2030 Vision. However, despite efforts to encourage entrepreneurial intentions (EIs), many individuals struggle to take actual entrepreneurial actions (EAs) and start businesses. This gap between EI and entrepreneurial behaviours, has led researchers to seek explanations for why potential entrepreneurs do not act.

**Purpose:** This research aims to uncover why there is a gap between EI and EA among young people, by identifying the obstacles preventing them from turning their intentions into actions. It seeks to validate the Theory of Planned Behaviour (TPB) model in the Saudi context and to follow up with recent graduates to see if they have taken any entrepreneurial actions after completing their studies.

**Design/Methodology/Approach:** Quantitative data was collected from 301 Saudi students in 2020, followed by a survey six months after graduation to assess their EA. Interviews were then conducted to explore barriers. Another survey was sent to 231 students in 2021, with a follow-up after graduation. This allowed testing of EI during and after COVID-19 restrictions.

**Findings:** The results provided evidence that the TPB model is valid in the Saudi context suggesting a strong association between EI and the TPB antecedents. A mediation analysis indicated that the three TPB antecedents were mediators between the social and societal factors (SAS) and EI. Analysis of the qualitative data pointed towards certain barriers preventing the participants from taking EA, these included the lack of financing, communication, training, and experience alongside bureaucracy and anxiety about expensive penalties.

**Originality:** The findings represent an original and novel empirical test of the TPB model in the context of Saudi Arabia. This thesis represents a groundbreaking exploration of the dynamics of entrepreneurial intention and action in the specific socioeconomic context of Saudi Arabia. By focusing on this unique context, this study fills a significant gap in the entrepreneurship literature, particularly in the Gulf region. This study provides new insights into the complexity of entrepreneurial behaviour in a rapidly evolving economy by providing a comprehensive analysis of the factors that influence the gap between entrepreneurial intention and subsequent action. This study employed a mixed method approach combining qualitative and quantitative approaches to gain a nuanced understanding of the complexity of the

entrepreneurial decision-making process among Saudi Arabian individuals and aspiring entrepreneurs. By incorporating a culturally sensitive framework and contextual factors, this study highlights the unique challenges and opportunities inherent to the Saudi business environment. The findings of this paper will not only enhance the academic understanding of Saudi entrepreneurship but also aid policymakers and educators who aim to create a more conducive environment for entrepreneurship development, which also has practical implications for business leaders. By identifying barriers to entrepreneurial activity and proposing targeted interventions, this study aims to facilitate further research and promote the emergence of a vibrant entrepreneurial ecosystem in Saudi Arabia. This dissertation makes a significant contribution to the field of entrepreneurship by providing new perspectives, methods, and perspectives tailored to the specific sociocultural and economic context of Saudi Arabia. This highlights the importance of contextual research for understanding and promoting entrepreneurship both locally and globally.

**Research Limitations:** This research has several limitations including generalisability of the findings to other populations a little bit, short follow-up intervals, participant distribution, and the absence of implicit measures. The generalisability of a study refers to the degree to which the findings can be applied or generalised beyond the study sample to other settings. When investigating entrepreneurial intentions and behaviours in the Saudi context, applicable to large populations with little bit variations due to COVID-19 but its generalisability may be limited by factors such as specific culture and economic differences in the Saudi context and other areas of the world.

**Theoretical Implications:** The findings of the research confirm the applicability of the TPB model in the Saudi context. Additionally, the study introduces the Social and Societal (SAS) factors as a new antecedent to the TPB model.

**Practical Implications:** The findings suggest that interventions aimed at enhancing EI and facilitating the transition to EA should consider the influences of attitudes, social norms, perceived control, and broader societal factors. By addressing these factors, policymakers and educators can create an environment to support entrepreneurship and contribute to economic growth and development.

## **Dedication**

*To my mother, who prays for me every day.*

*To my father, who has been supporting me since I was a child.*

*To my father-in-law and mother-in-law, who have supported me during my study journey.*

*To my daughter, Jori, and my sons, Mohammad and Sattam, and to my brothers and sisters.*

*A special dedication to my lovely wife, who stands by me shoulder to shoulder to achieve our goals.*

*A special dedication to my supervisors, Professor Sara Connolly and Associate Professor Susan Sayce, who have never hesitated to support me since day one of my PhD journey.*

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## **List of Abbreviations**

ATB	Attitude Toward Behaviour
EAs	Entrepreneurial Actions
EIs	Entrepreneurial Intentions
TPB	Theory of Planned Behaviour
SAS	Social and Societal Factors
SN	Subjective Norms
PBC	Perceived Behavioural Control

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## **Chapter One: Introduction**

This first chapter serves as an introduction to the thesis by giving a broad overview of the link between entrepreneurial intention (EI) and entrepreneurial action (EA). It starts with background on the research, identifies the research gap and possible contribution to the field, and then the research objectives, significance, and questions. The chapter ends with the structure of the thesis.

### **1.1 Research Background**

In recent studies, there has been an interest in studying entrepreneurship and EI because of their role in developing national and international economic growth. Therefore, governments and educational ministries or agencies, especially in developing nations, are working very hard to foster EI among younger generations (Ali et al., 2019). This is because younger people are potential future entrepreneurs, and encouraging them to innovate, take risks, and start businesses helps in overcoming the economic challenges faced by less developed countries, such as the high unemployment rate (Alayis et al., 2018). This encouragement can be achieved by increasing their EI through entrepreneurship education programs, reducing entrepreneurship barriers and challenges, and promoting an entrepreneurial culture (Ozaralli et al., 2016). Research and studies in this field have helped in identifying what factors encourage or discourage EI among potential entrepreneurs. According to Schlaegel et al. (2014), a large number of empirical studies focus only on EI. These researchers seem to agree with Ajzen (1991), finding that intention is the best predictor of action; the stronger the intention, the greater the possibility that the actual behaviour will be adopted. However, according to Schlaegel et al. (2014), Donaldson (2019), Kautonen et al. (2015), Kautonen et al. (2013), and VanGeldereren et al. (2015), only a limited number of studies have investigated the link between intention and actual behaviour. These researchers agree that intention does not necessarily lead to action and that many people could have a high level of intention but fail to transform that intention into actual behaviour. This is called the intention and action gap (Kautonen et al., 2013).

Many recent studies have called for an investigation of the intention and action gap. This thesis answers these calls. For example, in their meta-analysis of 98 EI studies, Schlaegel et al. (2014) found that only a limited number of studies have investigated the impact of EI on entrepreneurial behaviour. They encouraged future researchers to use longitudinal studies to

explore the link between intention and actual entrepreneurial behaviour. Donaldson (2019), who examined 163 EI articles published between 2014 and 2018, found that no EI researchers have conducted a longitudinal study using a mixed-methods approach. The researcher encouraged future researchers to overcome their hesitation in applying this complex approach to the intention and action link. Fayolle et al. (2014a) also emphasise the value of applying a mixed-methods approach and using a longitudinal study to study the link between intention and action. Hence, the researcher in this thesis addresses the scarcity of research in this area using this under-utilised methodological approach to bring more insight and knowledge to this important topic.

## **1.2 Research Gap**

As stated above, only a small number of studies have looked into the link between EI and EA. Additionally, the role of social and societal factors in creating EI and in transforming these intentions into actions requires more investigation. Instead of focusing on the psychological factors that might help to explain the intention and action gap, as taken by Gielnik et al. (2014), van Gelderen et al. (2015), and van Gelderen et al. (2018). The researcher plans to concentrate on the social and societal factors that may help or hinder the transformation of intention into action, such as the role of the economy, politics, rules and regulations, successful parent entrepreneurs, entrepreneurship culture, entrepreneurship programs, and government support as they relate to the link between EI and action. In their meta-analysis of 98 EI studies, Schlaegel et al. (2014) call for future studies that explore the role of the laws, regulations, and policies created by formal institutions as well as the role played by cultural norms and values in creating a new venture. Ozaralli et al., (2016) illustrates the need to understand the variety of factors connected to EI in various context and cultural situations. The authors stated that less is understood about environmental, social, and cultural elements that foster those early EIs. Studies on this subject that are cross-cultural and conducted in cultural, social, and economic contexts other than the United States are also uncommon. This research will respond to this call. Given the mixed methods approach, other factors could emerge as key themes when interviewing participants.

### **1.3 Research Contributions**

Theoretical contribution: This research contributes to the Theory of Planned Behaviour (TPB) by applying a longitudinal and mixed-methods approach. Another contribution to the theory is the addition of the social and societal factors (SAS) antecedent.

Methodological contribution: This research applies the explanatory sequential mixed-methods design and extends the work of other researchers who started to investigate the EI and EA gap by using longitudinal methodology (e.g. Kautonen et al., 2013; Kautonen et al., 2015; Gielnik et al., 2014; van Gelderen et al., 2015; van Gelderen et al., 2018; Bogatyreva et al., 2019; Weiss et al., 2019).

Employability contribution: The findings will also advance understanding of employability, particularly in developing nations, where a lack of public and private employment opportunities pushes young people including university graduates into starting their own businesses.

### **1.4 Research Aim and Objective**

This research sought to investigate the gap between EI and EA among young populations, specifically recent university graduates in Saudi Arabia, and to identify obstacles preventing the transformation of EI into EA. Additionally, the aim is to test the validity of the TPB model in the context of Saudi Arabia. In particular, the current research aims to achieve the following objectives.

1. To examine the factors contributing to the discrepancy between EI and EA among younger populations.
2. To identify the obstacles preventing recent university graduates from translating their EI into EA.
3. To assess the applicability and validity of the TPB model in explaining EI and EA among Saudi university graduates.
4. To determine the extent to which the TPB model components (attitude towards behaviour, subjective norms, perceived behavioural control) influence EI and EA in the Saudi context.
5. To determine the prevalence of recent graduates who have initiated entrepreneurial activities and explore the factors influencing their decision to do so.



## 1.5 Significance of the Research

Developing countries have ambitions to promote entrepreneurship, this includes Saudi Arabia which has created an ambitious governmental policy around entrepreneurship to help young people (and others) develop new businesses and grow existing businesses. In particular, encouraging entrepreneurship has recently gained significant attention in Saudi Arabia, particularly in the context of Saudi Vision 2030 and its associated reform program. This roadmap, initiated by Prince Mohammed bin Salman, aims to diversify the Saudi economy, reduce its dependency on oil, and foster sustainable development across various sectors. Entrepreneurship is positioned as an important driver in achieving these goals, as it can foster innovation, job creation, and economic growth (Yusuf & Abdulmohsen, 2022).

As part of the Saudi Vision 2030, the government has introduced a series of strategic initiatives to create a conducive environment where entrepreneurs can establish their businesses successfully with a high profit. The success of these efforts includes both legislative reforms and financial support mechanisms. Regulatory changes have been implemented to simplify business registration processes, reduce bureaucratic obstacles, and enhance the ease of running businesses. The aim of these reforms is to attract domestic and international investors to run their businesses in Saudi Arabia (Savelainen, 2020).

Financial incentives and support mechanisms are also integral to the entrepreneurship drive in Saudi Arabia. The establishment of venture capital funds, business accelerators, and incubators has facilitated access to funding, mentorship, and resources for budding entrepreneurs (Moshashai et al., 2020). Furthermore, the focus on contributing to entrepreneurship extends to education and skill development. Educational reforms aim to foster the youth with the necessary skills and mindset to become successful entrepreneurs. The integration of entrepreneurial education in schools and universities encourages students to explore innovative business ideas from an early age (Nieva, 2015). By focusing on entrepreneurship as a key driver of economic diversification and growth, Saudi Arabia is actively creating an environment that empowers entrepreneurs to transform their innovative ideas into thriving businesses (Yusuf & Albanawi, 2016), particularly with the Saudi Vision 2030 and its transformative reform program.

The aim of these policies and initiatives is to help with Saudi Arabia long-term future development growth as a country and reduce unemployment. As the EI and EA gap already exists these entrepreneurship promotions and initiatives would not help in achieving its main objective, which is to expand the number of small and medium businesses. Therefore, this research was necessary, and its findings will help policymakers decide how to close the gap between EI and subsequent entrepreneurial behaviours in the Saudi context and similar contexts. The research findings and recommendations will also help to increase the number of entrepreneurial activities and job opportunities available to young people. This, eventually, will reduce the unemployment rate, especially in developing countries.

## **1.6 Research Questions**

1. To what extent are the TPB model and its antecedents, including the SAS, valid in the Saudi context?

This question aims to investigate the validity of the TPB model in explaining EI and EA among Saudi university graduates, with a specific focus on the inclusion of social and societal factors (SAS) into the TPB model.

2. Do university students in Saudi Arabia transform their EI into EA after completing their studies?

This question explores whether Saudi university students convert their EI into EA after graduation, considering the influence TPB model and its antecedents including SAS on this process.

3. What factors prevent graduating university students in Saudi Arabia from transforming their EI into EA?

This question aims to identify barriers preventing Saudi university graduates from translating their EI and EA, examining how these barriers are associated with the components of the TPB model, including SAS.

## **1.7 Research Outline**

The thesis is structured into seven chapters to provide a clear organisation. Chapter One serves as an introduction, setting the stage by presenting the research background, research gap, research contributions, research aim and objectives, significance of the research, and research questions. In Chapter Two, a critical review of the literature is provided to explore existing research on the link between EI and EA, as well as presenting the concept of

entrepreneurship and its processes. This chapter covers definitions of entrepreneurship, the early-stage entrepreneurial process, entrepreneurial intentions and actions, intention-based models, cultural and societal factors, the impact of COVID-19 on entrepreneurial intentions, and entrepreneurship in the context of Saudi Arabia. Chapter Three details the research methodology, including the research philosophy, approach, design, strategy, data collection methods, questionnaire and interview design, reliability testing, data analysis procedures, and ethical considerations. Examine how the COVID-19 pandemic has influenced entrepreneurship globally and within the Saudi context, considering both challenges and opportunities. The selection of Saudi Arabia as the research context, highlighting its unique socio-cultural and economic characteristics, as well as the government's efforts to promote entrepreneurship. Discuss how the research design accounts for the impact of COVID-19 on data collection, analysis, and interpretation, including any adaptations made to accommodate changing circumstances. In Chapter Four, the results of the quantitative research are presented. This includes statistical tests such as descriptive analysis, factor analysis, correlation analysis, regression analysis, and mediation analysis within the Saudi context, considering the moderating effect of COVID-19. Chapter Five presents the findings of the longitudinal research design, focusing on both EI and EA, examining how these constructs have evolved amidst changing economic, social, and environmental conditions. Analyse longitudinal trends to identify the effects of COVID-19 on entrepreneurial behaviour in Saudi Arabia. Chapter Six provides the findings of the qualitative analysis, focusing on themes such as financing as a liability, government involvement, acquiring knowledge and experience, fear of failure, starting a business during COVID-19, and factors leading to EI and EA. It sheds light on the experiences, motivations, and challenges faced by entrepreneurs in Saudi Arabia, particularly in the context of COVID-19. Finally, Chapter Seven serves as the concluding chapter. It offers an overview of the thesis, summarizing the key research findings, discussing theoretical implications, practical implications, policy contributions, and limitations, and suggesting areas for future research within the Saudi context, considering cultural, social, and economic factors, as well as the influence of COVID-19.

## **Chapter Two: Literature Review**

### **2.1 Introduction**

The aim of this chapter is to review the existing literature and provide a critical take on studies that are significant relative to this research. It starts by identifying the concept and the process of entrepreneurship applied in this thesis. This is followed by a discussion of the current literature investigating the link between EI and EA, identifying the previous approaches and methods employed by other researchers, which help in finding the important issues and gaps that remain unsolved. The relevant intention-based models or theories are also reviewed. The role of national culture and social and societal factors in influencing and shaping young men and women's choices in considering becoming an entrepreneur will also be explored. In addition, the researcher will shed light on the limited and recent studies that have just started to investigate EI during the COVID-19 pandemic as an influential factor in business decision-making. Finally, attention will be given to the Saudi economy and the existence of an EI and EA gap in Saudi Arabia.

### **2.2 Definitions of Entrepreneurship**

The term 'entrepreneurship' is linked to the French word *entreprendre*, which means 'to undertake' or 'to do something', and to date, there is no generic and single definition for this term (Gutterman, 2018). Defining entrepreneurship is complex due to the different research approaches and contexts in which it is studied. In this thesis, the researcher follows Gartner (1988) in taking the approach that the study of entrepreneurship should be viewed as a process that includes certain behaviours and activities. The researcher links this with Gutterman (2018) that these actions should relate to an intent to create new organisations over some time. The scope of the study that the researcher is looking at is the transition from being a student to being an entrepreneur, and this informs the choice of the entrepreneurship definition. Therefore, for the purpose of this thesis, the definition needs to include a combination of process and behaviours, and this led the researcher to apply the approach taken in the Global Entrepreneurship Monitor's (GEM) project when undertaking annual assessments of national entrepreneurial activity. GEM, a partnership between London Business School and Babson College, broadly defines entrepreneurship as "any attempt at new business or new venture creation, such as self-employment, a new business organisation, or the expansion of an existing business, by an individual, teams of individuals, or established

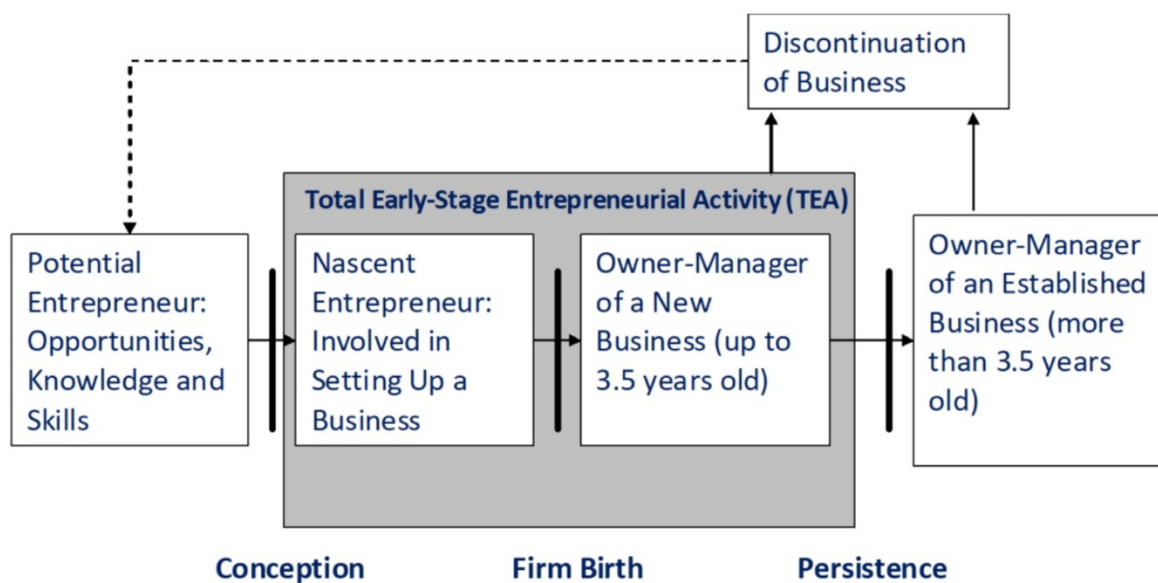
businesses.” (GEM, 2018). While other – broader – definitions of entrepreneurship include the act of acquiring an existing organisation or the act of innovative change in an existing product or service inside an existing organisation, they are less likely to be relevant for university students (the research sample) who have just finished their studies lack business experience and adequate financial resources to acquire and run an existing organisation.

In terms of what might constitute entrepreneurial behaviours, Kautonen et al. (2015) focus on entrepreneurial activities where the individual intends to develop a business plan (written or unwritten), develop a product or service, talk with potential customers, collect information about competitors, produce financial projections, approach financial institutions or individuals for funds, and/or acquire equipment, supplies, or premises. In other words, the behaviours that are undertaken by the entrepreneurs during the process of starting up a business instead of the outcome of starting a business. These behaviours are more likely to be taken by a student who has just graduated and so they will be considered as entrepreneurial behaviours or actions.

### 2.3 Early-Stage Entrepreneurial Process

The Global Entrepreneurship Monitor (GEM), one of the largest and most comprehensive entrepreneurship research programs since 1999, also views entrepreneurship as a process that individuals experience over some time. This process is shown in Figure 2.1.

Figure 2.1: The GEM’s entrepreneurship process.



Source: The GEM Report, 2018. P. 34

In the first phase of the process, the potential entrepreneur sees opportunities and thinks that they are capable of starting a business based on their abilities and the resources they have. In this early stage of the process, they do not have a high fear of failure. The GEM research team used different measures to assess the level of entrepreneurial perceptions, intentions, attitudes toward entrepreneurship, fear of failure and entrepreneurship as a good career choice to identify potential entrepreneurs. Nascent entrepreneurs in the second phase are those who have already started a business and are in the early stages of running it (for up to three months, GEM, 2018).

The researcher intended to focus on these early-stage entrepreneurial processes, the potential entrepreneur and the nascent entrepreneur phases, for three reasons. First, the main topic is the link between EI and EA, and this link can only be investigated in these two phases. Second, the researcher is in line with other researchers who believe in the reality that intention toward entrepreneurship is not enough to predict EA or behaviours that lead to nascent entrepreneurship (e.g., van Gelderen et al., 2015; van Gelderen et al., 2018; Gielnik et al., 2014). That is, the focus will be on these two phases because the researcher plans to find what barriers or obstacles can prevent potential entrepreneurs from becoming nascent entrepreneurs. Third, the GEM report showed that in 2018 (the last GEM report published before planning for this thesis), about 33% of the Saudi population were potential entrepreneurs who intend to start a new business in the next three years. However, the number of nascent entrepreneurs is only 5.3%. Therefore, it is worth investigating the reasons for the existence of this gap by focusing on these two stages. The EIs in the Saudi context after the year 2018 will be discussed in this chapter under the term EI during COVID-19, section 2.7.

## **2.4 Entrepreneurial Intentions and Actions**

Due to the importance of entrepreneurship in developing economic conditions, many scholars are interested in understanding the start-up process. The entrepreneurship process starts with the intention to perform an entrepreneurial behaviour (Kautonen et al., 2015); that intention has been described as a ‘person’s readiness to perform a given behaviour’ (Ajzen, 1991, p. 38). Entrepreneurial Intention is a self-acknowledged conviction by a person that they intend

to set up a new business venture and consciously plan to do so at some point in the future (Thompson, 2009, p. 676).

Entrepreneurial intention as a research field is evolving rapidly, with an increasing number of studies adopting it as a solid theoretical framework. While no singular effort has yet integrated alternative models into a unified framework, researchers have demonstrated the compatibility of intention-based models, thereby consolidating the field under the umbrella of entrepreneurial intention models. Ajzen's (1991) TPB remains the predominant specification within this framework. Research on the cognitive aspects of entrepreneurship has primarily centered on Entrepreneurial Intentions (Fayolle et al., 2014; Fayolle & Liñán, 2014; Souitaris et al., 2007). Within this, entrepreneurial intentions have been the focal point, with the TPB (Ajzen 1991) emerging as the most prevalent and widely validated theory for elucidating entrepreneurial intention. The TPB posits three antecedents—personal attitude, subjective norm, and perceived behavioural control—as determinants of entrepreneurial intention. Importantly, values and motivations are thought to influence the formation of entrepreneurial intentions. It has been suggested that diverse motivations may generate varying degrees of personal attitude, subjective norm, and perceived behavioural control, thereby leading to distinct entrepreneurial intentions.

A study by Bozward et al. (2023) examined how 679 undergraduate students from Chinese and UK universities view entrepreneurship programs and support. The research found that students valued various types of interventions, with business training being the most important, followed by mentoring, affordable financing, specialized business advice, enterprise clubs, and business networking events. The study also discovered that students with different intentions had different preferences for these interventions. The difference is based on different factors. Cultural norms and values in the UK and China may influence students' attitudes towards entrepreneurship and intervention preferences. For example, in cultures that emphasize collectivism, students may prioritize interventions that promote cooperation and teamwork, while in more individualistic cultures, students may prefer interventions that promote independence and autonomy.

Differences in the structure and focus of the UK and Chinese education systems may influence students' exposure to entrepreneurship and their perceptions of available interventions. For example, if entrepreneurship education is more integrated into the

curriculum in some countries than in others, this may influence students' familiarity with entrepreneurship support programs and their receptiveness to various interventions. Economic conditions and entrepreneurial opportunities may differ between the UK and China, which may influence students' intervention intentions and preferences. For example, students in regions with thriving startup ecosystems may prioritize interventions that promote access to funding and mentoring, while students in developing regions may prioritize interventions that promote practical skills training and provide opportunities.

Cultural perceptions of entrepreneurship (e.g., risk-taking, success, and failure) may differ between the UK and China, which determines students' attitudes towards entrepreneurship and intervention preferences. For example, in cultures where society values and rewards entrepreneurship, students may be more likely to pursue business ventures and seek interventions that support their aspirations.

Differences in policy and institutional support for entrepreneurship between the UK and Chinese governments may also affect students' perceptions of and preferences for interventions. Differences in available resources, regulatory frameworks, and support networks may affect the effectiveness and accessibility of entrepreneurship interventions in each context.

Empirical research comparing the two groups is needed to determine whether UK and Chinese students' preferences for entrepreneurship interventions based on different intentions do differ. This study should consider the above factors, and possibly others, to fully understand the differences.

According to Schlaegel et al. (2014), many empirical studies focus on EI. These researchers seem to agree with Ajzen (1991), finding that intention is the best predictor of action; the higher the intention, the greater the possibility that the actual behaviour will be adopted (e.g. Ozaralli *et al.* 2016, Aloulou 2016, Alayis *et al.* 2018, Ali *et al.* 2019, Alessa 2019, Ruiz-Rosa et al., 2020 and Gomes, 2021). However, only a limited number of studies have investigated the link between intention and actual behaviour. This, relatively limited body of research, tends to argue that intention does not necessarily lead to action and that many people could have a high level of intention but fail to transform that intention into actual behaviour.



A study by Duong (2022) found that the intention to start a business partially mediates the link between entrepreneurial attitude and action. However, this effect is weaker when the fear of failure is high. Additionally, the indirect effect of entrepreneurial attitude on behaviour through start-up intention is influenced negatively by fear of failure. These findings are significant for understanding entrepreneurship and shed light on further research in the field.

Mackiewicz (2023) highlighted significant gaps in understanding the early stages of starting new businesses, particularly in areas like commitment, procrastination, and gaining entrepreneurial knowledge from informal sources. To address this, Mackiewicz conducted a qualitative study on wantrepreneurs—those considering entrepreneurship but not taking action. This study led to the proposal of several hypotheses and an extension of the entrepreneurial event model. The study uses three hypotheses which are about Procrastination, Commitment, and Exposure to informal entrepreneurship learning positively moderate the link between entrepreneurial intentions and behaviour. The first one is negatively moderate and the other two positively moderate the link between entrepreneurial intentions and behaviour. The used event mode is called the Extended Entrepreneurial Event Model. EEEM focuses on the problem of seemingly vicious cycles in entrepreneurship and how in some cases entrepreneurship leads to the inability to start a company. Although potential entrepreneurs may have clear goals and some implementation objectives, these intentions are not sufficient to "drive" all stages of entrepreneurial activities until the registration of a company. Especially if the impact of current goals on behaviour is negatively affected by procrastination, individuals may get stuck in the knowledge acquisition stage or the cycle between learning and business idea development and evaluation. Entrepreneurs who are stuck in the first two stages do not form the commitment that strengthens their entrepreneurial ambitions. Simply learning a business idea and putting it into practice is not an expensive activity. Therefore, individuals do not generate tangible resources in their entrepreneurial activities.

A meta-analytic review study (Tsou et al., 2023) looked at how the intentions of people to start a business match up with their actual behaviour. The goal was to summarize all the existing research on this topic and analyse how different factors affect the associations between intention and action. They analysed data from 75 studies involving over 150,000 people. The results showed that the associations between intention and behaviour is largely

consistent across different situations and groups of people, but it can vary based on how behaviour is measured, where the data comes from, and how much time passes between intention and action. Data sources such as laboratory experiments, field studies, and longitudinal studies can influence the relationship between intention and behaviour. For example, intention may be more predictive of behaviour in a controlled laboratory setting than in a real-life situation where individuals face various external influences and constraints. Surprisingly, intentions only explain about 17% of why people start businesses, not the 37% that is often assumed. This suggests the need to think more about why people do (or do not) what they say they will do, and we should look at both thoughts and actions to understand this better (Tsou et al., 2023).

A study conducted by Joensuu-Salo et al. (2020) followed individuals from their time as students until six to eight years after graduation to explore the link between their intentions to start a business and their actual actions. Joensuu-Salo et al. used the theory of planned behaviour to understand how entrepreneurial intentions develop over time and whether they lead to starting a business. The study, based in Finland, collected data in three waves between 2008 and 2018. In the second wave, they reached 282 respondents, and in the third wave, they reached 89 respondents. The findings suggest that intentions to start a business remain quite stable over time, regardless of whether they are high or low. Moreover, these intentions measured during the students' study years significantly predict whether they will start a business one to three years or six to eight years later. Additionally, factors like gender and having role models significantly affect whether someone will start a business.

According to Shirokova and colleagues (2022), circumstances can either help or hinder turning entrepreneurial intentions into actions. There are three types of circumstances categorized in this way.

1. Certain events can create favorable conditions for individuals to realize their entrepreneurial aspirations. This includes access to resources such as funding, mentoring, networks, and a supportive entrepreneurial ecosystem. In addition, favorable economic conditions, market opportunities, and regulatory environments may encourage individuals to engage in entrepreneurial activity.

2. Conversely, other situations may present barriers and challenges that hinder the realisation of entrepreneurial intentions. These may include limited access to financial capital, lack of social support and networks, regulatory burdens, economic instability, and cultural norms that stigmatize entrepreneurship or discourage risk-taking. Personal factors such as fear of failure, lack of self-efficacy, and competing demands of other roles in life (family responsibilities, work obligations, etc.) can also inhibit entrepreneurial behaviour.

3. Shirokova et al. can study how different situations interact with individual characteristics and intentions to influence entrepreneurial behaviour. For example, a supportive entrepreneurial ecosystem may increase the likelihood of acting on entrepreneurial intentions, but the effect may vary depending on personal factors such as prior experience, skills, and motivation.

Understanding the interaction between context and entrepreneurial intention has important implications for policymakers, educators, and practitioners seeking to foster entrepreneurship. Policies and initiatives aimed at promoting entrepreneurship may need to address both institutional barriers and individual factors to effectively support aspiring entrepreneurs. Similarly, entrepreneurship education and training programs may need to consider the broader contextual factors that shape entrepreneurial behaviour and provide students with the skills and resources needed to overcome these challenges. Shirokova and colleagues may have identified areas for future research aimed at further elucidating the complex relationship between context, intention, and entrepreneurial behaviour. This may include investigating specific contextual factors that influence entrepreneurial behaviour, investigating the mechanisms through which these factors operate, and identifying strategies to overcome barriers to entrepreneurial behaviour. They studied data from a large survey of GUESSSS, carried out in 2011 and 2013/2014, involving 1434 students from 142 universities in nine countries. Their research focused on how country-level factors like financial and legal systems affect the associations between entrepreneurial intentions and actual start-up actions. They found that good legal systems positively affect turning intentions into actions, but the quality of the financial system doesn't seem to have an impact on this connection.

Entrepreneurship is often seen as a planned action. Forming intentions to start a business is a key step in this process. However, not all intentions turn into actions. A study by Neneh (2019) investigated two factors –proactive personality and anticipated regret – to understand

how they influence turning intentions into actions. The study surveyed 277 people twice to find out how these two factors impact the associations between intentions and behaviour. The results showed that proactive personality and anticipated regret can make intentions more likely to become actions. Anticipated regret plays an important role in decision-making and can be related to proactive personality in several ways.

1. People with aggressive personalities may exhibit higher levels of risk-taking behaviour. Anticipated regret affects how you evaluate risk. Those who anticipate feeling strong regret for negative outcomes may be less willing to take risks. On the other hand, if you anticipate regretting missing an opportunity, you may be more willing to take calculated risks.
2. Anticipated regret also affects decision-making style. People with higher expectations of regret may carefully consider possible outcomes before making a choice and engage in a more deliberate decision-making process. Conversely, those who expect less regret may make decisions faster and be more willing to try new strategies.
3. Proactive people tend to have a strong future orientation and tend to focus on long-term goals. Anticipated regret affects how we view the consequences of future actions. If you anticipate regretting something you didn't do or an opportunity you missed in the future, you may be more motivated to take proactive steps to avoid that regret.
4. Proactive people and those with high regret expectations may be more cautious, but their strategies for learning from mistakes may differ. Proactive people may view mistakes as opportunities to grow and learn, while those who expect regret may focus on avoiding mistakes altogether.

The study concludes that both proactive personality and anticipated regret are associated with decision-making, but their interactions vary depending on individual differences and situational factors. High or low anticipated regret affects how individuals proactively respond to risk, make decisions, orient to the future, and learn from experience.

A further search of the literature reveals that since it is a complicated subject, only a limited number of studies focus on the intention and action gap. This gap involves psychological and sociological factors, as well as situational elements and circumstances, that could either inhibit or motivate people to take entrepreneurial actions (van Gelderen et al., 2015). Some researchers have therefore started to investigate this issue, including Kautonen et al. (2013),

Kautonen et al. (2015), van Gelderen et al. (2015), Gielnik et al. (2014), Bogatyreva et al. (2019), and Weiss et al. (2019).

Weiss et al. (2019) used The Global University Entrepreneurial Spirit Students' Survey (GUESSS) data, the largest project among the EI studies, to link the intention and action gap to the concept of social capital in an attempt to determine what could bridge the gap. Similarly, Bogatyreva et al. (2019) tried to determine the role of national culture in the intention and action gap by using the GUESSS data and applying Hofstede's cultural dimensions to understand cultural differences in several countries (Germany, Switzerland, Austria, Netherlands, Estonia, Russia, Hungary, Brazil, and Singapore). Donaldson (2019) examined 163 articles concerning EI that were published between 2014 and 2018 and found that a limited number of studies used a longitudinal method to investigate the intention and action gap (e.g. van Gelderen et al. 2015; van Gelderen et al., 2018; & Gielnik et al., 2014). They encourage future researchers to investigate this gap. Since these studies are closely related to the researcher's work (investigating the entrepreneurial intention and action gap in the Saudi context), it is worth reviewing them in more detail.

Gielnik et al. (2014) employed a psychological perspective to investigate the role of EI and action in new venture creation. Specifically, they examined the role of action-regulatory factors in explaining EA. These action-regulatory factors include goal intention (what an individual wants to achieve), action planning (how he or she will achieve it), and positive fantasies (imagining a bright future). According to Gielnik et al. (2014), previous studies focused only on the effect of action-regulatory factors on new venture creation, neglecting the impact of these factors on the process of starting up a business over a longer period. This gap in the literature led these researchers to use a longitudinal study to collect data, which occurred over 30 months.

The researchers used a qualitative approach—face-to-face interviews—to collect their data. To do so, they hired interviewers and trained them to conduct interviews with the participants. The targeted sample comprised adults aged 18-64 years living in Kampala, Uganda. Data were collected in three waves: 0 months, 6 months, and 30 months. In the first wave (0 months), the researchers interviewed 139 participants, asking them questions to measure goal intentions, action planning, and positive fantasies. The second wave (6 months) and third wave (30 months) measured whether and when the participants had taken (or not

taken) action. Seventy-one participants participated after six months and 100 after 30 months. The results show that 55% of participants started their businesses within 30 months. Therefore, 45% had not started a business despite having the intention to do so. This confirms that intention alone is not enough to take the actions necessary to start a business in either a developing (Uganda) or a developed (Finland/Austria) context due to the different economic/development contexts between Finland/Austria and Uganda.

As Gielnik et al. (2014) intended to determine at what point during the 30 months goal intention, action planning, and positive orientation about future events independent of past experiences took effect and when they wore off, they found that goal intention combined with high action planning helps in creating a new venture. This effect wears off after 12 months. They also found that positive fantasies affect venture creation negatively when combined with action planning, an effect that lasts only ten months after the intention, at which point it begins to wear off. The researchers suggested that future studies addressing action-regulatory factors apply a 10- to 12-month time frame in which to investigate EI and the EA gap.

Similar to Gielnik et al. (2014) and Kautonen et al. (2015), van Gelderen et al. (2018) collected data randomly from the adult population of Sweden (ages 18-70). The time lag between the two waves was six months—from May 2015 (wave 1) to November 2015 (wave 2)—making it the study with the shortest period compared to other longitudinal studies of EI and the action gap. For the first wave, researchers sent the survey to 3,500 individuals, receiving 2,092 responses. The survey was designed to be short, and the pilot study shows that it takes only five minutes to complete it. The number of participants who participated in both waves was 422. Van Gelderen et al.'s (2018) show that only 7% of the participants had already started and begun running their businesses and that 9% had got their business close to being operational. The researchers also found that implementation intention has a positive effect when translating goal intention into action. Additionally, they found that strong goal intention leads to achieving implementation intention, which would help in taking action.

The results also show that 30% of the 422 who had participated in both waves had not taken any action despite showing EI in the first wave. The results also show that 23% of the 422 participants also had intended to start up a business, but had not done so and had spent less than 1 hour per week on start-up activities. This finding is comparable with those of Kautonen et al. (2015), who found that 63% of the participants who had expressed intention

had not undertaken entrepreneurial actions after 12 months. Gielnik et al. (2014) found that 45% of the participants who had expressed intent had not taken any action after 30 months. One difference between the two studies involves the time lags between the two waves. The gap between the two waves in van Gelderen et al.'s (2018) study was six months, while the study of Gielnik et al. (2014) lasted 30 months and involved three waves (0 months, 6 months, and 30 months).

It should be noted that, while other researchers used the TPB, Gielnik et al. (2014) used the action regulation theory. This is because the focus was on the psychological factors that influence those with entrepreneurial intentions to engage in actual entrepreneurial behaviour. While using a different theoretical framework may increase the originality of the Gielnik et al study, its results are not consistent with similar studies. It is evident from the discussion sections of the Gielnik et al. (2014) study that the researchers did not compare the results to the existing literature. It has the same objectives but uses a different theory called Action Regulation Theory. Gielnik et al.'s use of the Action Regulation Theory offers a complementary perspective to traditional intention-based models like the TPB. By focusing on the dynamic processes involved in taking action, their study likely contributes to a deeper understanding of the mechanisms underlying entrepreneurial behaviour. But it also used some same factors like environmental, social, and personal factors.

Van Gelderen et al. (2018) investigated the intention and action gap by applying psychological perspectives similar to those in the study by Gielnik et al. (2014). However, as this study aimed to measure the impact of implementation intentions on transforming EI into action, it used action phase theory instead of either action regulation theory or TPB theory. Action regulation theory and action phase theory are similar. Whereas action regulation theory includes the process of goal intention, action planning, and then action, the action phase theory process involves goal intention, implementation intention, and action. Since both implementation intention and action planning are similar—both involve plans concerning how to transform intention into action—van Gelderen et al.'s (2018) study and Gielnik et al.'s (2014) study are similar in terms of their theoretical approach.

## **2.5 Intention- Based Models**

Shapero and Sokol's (1982) model, called the Entrepreneurial Event Model (EEM), is a very popular model among intention studies. This model's intention antecedents are "perceived desirability" to be an entrepreneur, and "perceived feasibility", the likelihood to act. These two antecedents are considered to be predictors of EI. Similarly, Ajzen's TPB is also widely used in human behaviour studies, especially EI studies (Aloulou, 2016), which include three antecedents that lead to intentions. These are: ATB, SN, and PBC (Ajzen, 1991). In both models, perceived desirability is similar to ATB, and perceived feasibility is similar to PBC. Shapero and Sokol (1982) suggest that high perceived desirability and perceived feasibility may lead to the intention to act.

One advantage of the TPB is the inclusion of an SN antecedent to the model, which has helped the researchers to test the relationship between social factors (family and friends pressure to whether or not the individual should start up a business) and EI in different contexts. However, one disadvantage of the TPB model is that it does not take into account other social and societal factors such as the rules and regulations, government support to entrepreneurs, economic conditions, political conditions, and institutions' financial support. Therefore, there is a need to extend the TPB model by considering these factors.

The TPB model is a well-established theory used by many researchers focusing on EI. In their meta-analysis, Schlaegel et al. (2014) found that the TPB model was used by most of the 98 EI studies they identified. A recent systematic literature review of 163 EI articles published between 2014 and 2018 shows that TPB was the most commonly employed model (Donaldson, 2019).

TPB was proposed by Ajzen (1991), who simplified the meaning and the process of intention. The model includes three antecedents that influence an individual's intention toward a behaviour. The first antecedent is ATB, which refers to individual preference or one's propensity to engage in a desirable behaviour. The second antecedent is SN, which refers to the social pressures surrounding the intended behaviour, or the effect that the thoughts and opinions of influential people have on an individual's decision as to whether or not to engage in that behaviour. The last antecedent is PBC, which refers to a person's judgment as to whether performing the intended behaviour is difficult or easy. When a person feels that he or she has control over the necessary skills and resources, that person will have a high intention to perform the behaviour.



Research using the TPB framework in entrepreneurship has suggested that various psychological traits can influence the link between having the intention to start a business and taking action. For instance, Bernardus et al. (2020) found that having an internal locus of control strengthens this link, but traits like innovativeness and performance goal orientation don't have the same effect. Bernardus et al. (2020) found that the presence of an internal locus of control strengthened the relationship between entrepreneurial intention and behaviour. This suggests that people who believe they can control their outcomes and experiences are more likely to act on their entrepreneurial intentions. However, Bernardus et al. did not find the same effect for traits such as innovativeness and performance goal orientation. This suggests that these traits do not necessarily strengthen the relationship between entrepreneurial intention and behaviour.

Thus, the presence of an internal locus of control strengthened the relationship between entrepreneurial intention and behaviour, while traits such as innovativeness and performance goal orientation did not have the same effect. These findings emphasize the importance of considering these traits when predicting who is likely to start a business. Not only should entrepreneurs take their sense of control and intentions into account, but educators should also tailor business curricula based on students' psychological traits.

In their meta-analysis of 98 EI studies, Schlaegel et al. (2014) confirmed that EI explains only 37% of the variance in actual entrepreneurial behaviour. Another meta-analysis of 185 EI studies, all of which applied the TPB model, found that intention explains only 27% of the variance in behaviour (Armitage et al., 2001). Therefore, it is not enough to focus solely on EI as a predictor of entrepreneurial behaviour. Barriers and obstacles can prevent people from transforming their intentions into actions. After developing the intention, psychological factors play a significant role in taking action, including self-efficacy, goal-oriented behaviours, and fear of failure (van Gelderen et al., 2015). Rules and regulations and lack of financing could prevent these intentions from becoming actual behaviours. Or it may simply be that some people change their minds and choose to be employees instead of entrepreneurs to avoid risks and uncertainty (Kautonen et al., 2015).

Donaldson's review (2019) does not mention the study by Kautonen et al. (2013), because this was outside of the publication census period. However, this article is directly relevant to

the planned research in this thesis. Kautonen et al. (2013) note that the existing literature had not examined intention and subsequent entrepreneurial behaviour through the use of a longitudinal study. The researchers therefore used two waves of data collection—one in 2006 and other in 2009. The survey participants included members of the working-age population (18-64 years) in Finland. As is the case with most previous EI research, the researchers planned to test the validity of the TPB model in predicting business start-up intentions in the first wave and to assess the EI level of the participants. To do this, the researchers mailed 5,600 questionnaires randomly to three Western Finnish provinces, receiving 1,301 responses. In the second wave (after three years), the researchers received only 117 responses compared to the 1,301 responses received from the first wave, which shows the problems of attrition, especially when there is a lengthy time lag between the two waves. The second wave survey assessed whether the participants had made an effort to start a business. For instance, participants were asked, 'Have you started a business or thought about starting a business alone or together with others?'.

Similar to previous research on the TPB model and its validity in predicting entrepreneurial intentions, Kautonen et al. (2013) show that the TPB antecedents—attitude toward behaviour (ATB), subjective norms (SN), and perceived control behaviour (PBC)—are all significant predictors of EI in the Finnish context (explaining 41% of the variance in EI). The results of the second wave survey show that 51% of the participants had not thought about starting a business, 33% thought about it but had not taken any action, only 6% had taken action, and only 9% had started a business in the previous three years.

Kautonen et al. (2015) collected data from the adult population (20-64 years of age) in Finland and Austria. There were two waves—2011 [First wave (N=1926)] and 2012 [Second wave (N=969)]. Note that the researchers reduced the time lag between the two waves (1 year) compared to the 2013 study (three years). It seems that a shorter follow-up time is helpful, and this was made clear by the number of participants who participated in the two waves of the 2015 study (n=969) compared to the 2013 study (n=117).

Kautonen et al. (2015) investigated the intention and action gap among adults in Finland and Austria. The longitudinal study used two waves of data collection and designed the first survey to test adult EI. A year later, they surveyed the same group to see if they had undertaken any EA. Since establishing a business takes longer than 12 months, these

entrepreneurial actions (EAs) were not necessarily related to starting up a business. Entrepreneurial actions can include developing a product or service, seeking a bank loan, conducting marketing research, or drafting a business plan. Surprisingly, 63% of those in the first wave who were found to have EI did not take any action during the 12 months.

Kautonen et al. (2015) used only two survey waves, and while their findings are valuable, it could have been more informative to have also conducted interviews with those who had a high intention in the first wave but did not take any action in the second wave. The researchers noted that this group is worth studying and that future research should seek to find what prevents these people from taking EA.

Kautonen et al. (2015) explained that the short 12-month timeframe, which was recommended by Ajzen (1985), the founder of TPB, is required for the intentions and subsequent actions to take effect. Additionally, the researchers were concerned that a long time-lag between the two waves could result in participants developing EI after the first wave, which would not help them capture the effect of intention on action. A more extended timeframe may be necessary to detect significant changes in EI between time 1 and time 2.

In the first wave (2011), the researchers tested the ability of the TPB model to predict EI intention and to determine the participants' EI level. In the second wave, the researchers assessed entrepreneurial action by measuring the effort, time, and money participants had invested in business start-up activities during the 12 months following wave one. These activities included whether the participants had developed a business plan (written or unwritten), developed a product or service, planned marketing efforts, talked with potential customers, collected information about competitors, produced financial projections, or approached financial institutions or other people for funds. These actions also included whether participants had acquired equipment, supplies, premises, or other concrete items and whether they had dealt with administrative issues related to starting a business.

The results of the first wave indicate that the TPB model is valid in predicting EI in Finland and Austria. Both are found in Europe. Finland and Austria each have different entrepreneurial ecosystems and cultural backgrounds, but both countries offer opportunities and challenges to aspiring entrepreneurs. Globalization and cultural exchange have contributed to the continuous evolution of cultural customs and practices in Finland and Austria. This validation highlights the usefulness of the TPB model as a framework for

understanding and predicting entrepreneurial behaviour. It suggests that factors such as personal beliefs, social influence, and perceptions of control play an important role in shaping the intention to pursue entrepreneurship. These factors are the same in Finland and Austria like social beliefs, etc.

That is, the three TPB antecedents—attitude toward behaviour, subjective norms, and perceived behaviour control—jointly explain 59% of the variation in intention, which allowed the study's researchers to compare their results with other studies examining TPB antecedents. For example, they found that the subjective norms antecedent has the strongest effect on intention, a finding that is contrary to previous research which had a weak relationship between subjective norms and EI. The researchers also found that 232 out of the 371 (63%) participants who had intentions in the first wave did not take any action in the second wave. This high percentage confirms that intention does not necessarily lead to action.

While it seems that there is an agreement among the researchers regarding the relationship between ATB and PBC antecedents with the EI, there is a debate among researchers regarding the relationship between one of the TPB antecedents (SN) and EI (Schlaegel et al., 2014). Some researchers have demonstrated a strong relationship between the two (e.g. Kautonen et al., 2015), while other researchers have confirmed only a weak relationship between SN and EI (e.g. Linan et al., 2009). Some researchers decided to exclude SN from their models, and they decided to test the relationship between only ATB, PBC and EI. It seems that culture and values are related to SN antecedents, which might be the reasons behind this disagreement between the researchers. In other words, these studies were conducted in different contexts and different cultures. The thoughts and opinions of influential people have on an individual's decision as to whether or not to engage in entrepreneurial activities might not be important to potential entrepreneurs in an individualist society like the US. However, these thoughts and opinions of influential people are extremely important to the potential entrepreneurs in a collectivist society such as Saudi Arabia (Abdelwahed et al., 2022; Aloulou & Al-Othman, 2021; Hoda et al., 2021).

However, none of these studies investigated what prevented these people from taking action. The quantitative methodological approach used in these studies did not help in finding such valuable information. It seems that in-depth understanding is needed to determine why these

participants did not act; conducting face-to-face interviews with these participants and listening to their thoughts and opinions would help to identify these inhibitors.

The quantitative design meant that these studies were not able to explore why these participants did not take any action. It seems that future research should apply a mixed method. One survey could be used to determine the participants' EI, while a second, shorter survey could determine if they had taken any action. Face-to-face interviews could then be conducted to identify what prevents these participants from taking action.

*Table 2.1: Indicative Studies Utilized the TPB to study the Intention-Action Gap in Entrepreneurship Research*

<b>Study</b>	<b>Year</b>	<b>Main Focus</b>	<b>Findings/Contributions</b>
<b>Ajzen (1991)</b>	1991	Proposed TPB	Introduced TPB framework: ATB, SN, PBC as antecedents of intention. Ajzen's theory of planned behavior (TPB) claims that intention is an important predictor of behaviour. The theory states that intention is influenced by attitude toward the behaviour, subjective norm (perceived social pressure to perform or not perform the behaviour), and perceived control over the behaviour (perceived ease or difficulty in performing the behavior).
<b>Schlaegel et al. (2014)</b>	2014	Meta-analysis of 98 EI studies	TPB widely used in EI studies; intention explains 27% of variance in behavior. Investigated factors that influence entrepreneurial intention in different cultural contexts. The findings generally focus on how cultural values, educational background, and perceived opportunity influence entrepreneurial intention.
<b>Armitage et al. (2001)</b>	2001	Meta-analysis of 185 EI studies	Intention explains 37% of variance in entrepreneurial behaviour. Investigated factors that influence intention and behavior change in multiple domains, such as health and the

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			environment. They applied the theory of planned behaviour to understand how attitudes, subjective norms, and perceived behavioral control predict intention and subsequent behavior.
<b>Kautonen et al. (2013)</b>	2013	Longitudinal study in Finland	Validated TPB in predicting EI; found intention-action gap. Investigated the gap between entrepreneurial intention and action and found that while many people expressed entrepreneurial intention, few actually took action. They investigated the reasons for this gap, including barriers and facilitators to entrepreneurial activity.
<b>Van Gelderen et al. (2018)</b>	2018	Focus on implementation intentions	Used action phase theory; explored impact of implementation intentions on EI-to-action transformation. They studied how different types of entrepreneurial intentions (e.g., opportunity-driven vs. need-driven) influence subsequent entrepreneurial activity. They often distinguish between intention formation and intention realisation, emphasizing the complexity of translating intentions into action.
<b>Gielnik et al. (2014)</b>	2014	Action Regulation Theory	Used alternative theory to TPB; focused on psychological factors influencing EI-to-action process. They studied entrepreneurial self-efficacy and its role in shaping entrepreneurial intentions and behaviour. They investigated how individuals' beliefs about their ability to start and run a business influence the likelihood of continuing entrepreneurial activity.
<b>Aloulou &amp; Al-Othman (2021)</b>	2021	Cross-cultural study (Saudi Arabia)	Highlighted cultural influences (collectivism) on TPB antecedents (e.g., SN) in EI studies. They analysed factors that may influence

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			entrepreneurial intentions, particularly in the context of Saudi Arabia. They may have investigated cultural, economic, and educational factors that influence individuals' intentions to start a business in Saudi Arabia.
<b>Donaldson (2019)</b>	2019	Systematic review of 163 EI articles	TPB most commonly employed model in EI studies; noted limitations in addressing broader societal factors. They studied the role of environmental factors (e.g., government policies and economic conditions) in promoting or inhibiting entrepreneurial intentions and actions. They tend to investigate how external factors influence individuals' business behavior decisions.
<b>Bernardus et al. (2020)</b>	2020	Psychological traits influencing EI-to-action	Found internal locus of control strengthens intention-action link; innovativeness and goal orientation less impactful

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Table 2.1 summarizes key studies that have employed the TPB framework to explore entrepreneurial intention (EI) and its translation into entrepreneurial behavior, highlighting their main contributions and findings.

To further test the validity of the TPB in the Saudi context, and to compare the results with existing EI and EA studies, the following hypothesis will be tested in this research.

H1: An entrepreneurially favourable ATB is positively related to EI.

H2: An entrepreneurially favourable SN is positively related to EI.

H3: PBC is positively related to EI.

H4: A positive relationship exists between ATB and SN.

H5: A positive relationship exists between ATB and PBC.

H6: A positive relationship exists between SN and PBC.

H7: ATB, SN, and PBC are positively associated with EI.

## 2.6 Culture/ Social and Societal Factors

As far as culture is concerned, Hofstede (2010) defined culture as a “collective programming of the mind that distinguishes the members of one group or category of people from another”. From this definition, the term “category” might be interpreted as a nation, a religion, or an ethnic group in a society. The Leadership and Organizational Behavior Effectiveness (GLOBE) extends this definition and states that culture is a “shared motives, beliefs, identities, and interpretations or meanings of significant events that result from the common experience of members of collectives that are transmitted across generations” (2004, 2007 *Studies - GLOBE Project*, 2019). Therefore, religions, parents, family, friends, societies values and social norms contribute to establishing and shaping people behaviours. One of these behaviours is the way that humans choose to work and get an income. For some groups, working as an employee in an organisation could be the best choice. Other groups decide to engage in entrepreneurial activities and start up their businesses and be self-employed (Bedard et al., 2011). According to George and Zahra, culture has an influence on people’s behaviours to create, innovate and take risks which is affected by shared beliefs and values among society members (2002). Therefore, it is essential to understand the role of national culture in developing entrepreneurial activities.

Hofstede is the founder of the national cultural dimensions model, and he undertook an empirical study among IBM employees in fifty countries. The main objective of this study was to find the national cultural differences among the employees in a multinational organisation and their effect on their behaviors in their organisations. The Hofstede cultural dimensions model has been used frequently by researchers to investigate the effect of national culture on entrepreneurship (Obeidat *et al.*, 2012). Hofstede proposed five cultural dimensions including power distance, individualism/ collectivism, masculine/feminine, uncertainty avoidance and long-term or short term-orientation (Hofstede, 2010).

1. **Power distance:** “the degree to which the less powerful members of a society accept and expect that power is distributed unequally” (Gubik and Bartha, 2017, p.4).
2. **Individualism or collectivism:** “the degree to which the identity of the members of the society is defined in terms of the individual or a certain group” (Gubik and Bartha, 2017, p.4).
3. **Masculinity/feminine:** “the degree to which gender roles are separated from each other, and whether the society is based on material rewards for success or is consensus- oriented” (Gubik and Bartha, 2017, p.4).



4. **Uncertainty avoidance:** “the degree to which the members of the society feel threatened and uncomfortable with unexpected and unforeseen events” (Gubik and Bartha, 2017, p.4).
5. **Long-term or short-term term-orientation:** “the degree to which the society prefers a future-oriented, innovative, pragmatic approach to one focusing on traditions” (Gubik and Bartha, 2017, p.4).

Most of the studies that adapted Hofstede's model to understand the role of culture on entrepreneurship orientation focused only on three elements, power distance, individualism or collectivism and uncertainty avoidance dimensions. This is because researchers hypothesized that these dimensions have the strongest influence on entrepreneurial behaviours. For example, Shane reported on an empirical study across 33 countries to find the relationship between innovation and Hofstede cultural dimensions. He concluded that countries with high individualism enjoy high levels of innovation, and innovation could lead to entrepreneurship activities. Uncertainty avoidance and power distance were found to have a negative relationship with innovation. The greater the degree of uncertainty avoidance and power distance, the lower the innovation level the country would experience (Shane, 1993). However, high levels of power distance could encourage individuals to start entrepreneurial activities to achieve high status in their society (Castillo-Palacio et al., 2017). Therefore, it cannot be generalized to all cultures that high power distance would necessarily discourage entrepreneurial activities.

According to Shane (1993), collectivistic countries would have low levels of entrepreneurial activities. However, Gubik and Bartha found in their study that there is a positive correlation between Group Collectivism and EI. That is, the strong belonging to close friends and family would increase EI (2017). This argument supports the view that collectivistic cultures are better at creating entrepreneurial activities. This is because some people prefer to work within a group when starting a new business instead of facing business obstacles and barriers alone. Furthermore, initiating an entrepreneurial activity as a collective effort can provide valuable financial support, particularly during the initial stages of establishment.

Ali et al., (2010) studied empirically the effect of power distance, individualism and uncertainty avoidance on EI in the Pakistani context. They found that high power distance and low individualism (collectivist society) have a negative impact on EI among university

students. High uncertainty avoidance was found to have a negative impact on entrepreneurial intentions. The authors concluded that it was necessary to discourage power distance in Pakistani society to increase EI.

Additional studies have linked the cultural dimensions with the mode of entry into entrepreneurship. That is, starting a new business or taking over an existing business. Block and Walter showed in their study that individualistic cultures and high-power distance cultures tend to start new businesses, whereas cultures with high uncertainty avoidance prefer to acquire an existing business. The study included approximately 4500 participants in 34 countries (2017), which provides an opportunity to generalize the results. However, the study results show that high power distance could encourage individuals to start new businesses, whereas previous studies show that countries with high power distance discourage entrepreneurship activities. Therefore, it is clear that there is a debate within the existing literature about the effect of these cultural dimensions on entrepreneurship, which raises a concern that the relationship is probably weak or that other direct factors contributed to these differences in the results. Factors such as stable politics, stable economy, gender, family income and education could influence entrepreneurial activities more than individualistic culture or high-power distance culture. As Ali et al., (2010) found, political instability, poor regulatory quality, poor government mechanisms and high levels of corruption all negatively impact student EI in Pakistan.

Hofstede's cultural dimensions framework has been applied to analyse various cultural contexts, yet it is important to note that Saudi Arabia has not been individually studied by Hofstede. Instead, he classified a cluster of seven Arab nations under the umbrella term "Arab Group." In his analysis, Hofstede observed distinctive cultural traits within these countries, including characteristics such as a significant power distance and a strong inclination toward uncertainty avoidance. Moreover, he noted a prevalent sense of collectivism among these societies, indicating a preference for group harmony and collective decision-making. Additionally, Hofstede (2010) identified a moderate level of Masculinity/Femininity in this group, reflecting a balance between assertive and nurturing values. It is worth mentioning that while Hofstede's framework provides important evidence about cultural dimensions, its applicability to Saudi Arabia on an individual basis warrants a more in-depth investigation due to the unique historical, socio-economic, and cultural factors shaping the country's specific cultural dynamics.

Cassell and Blake (2012) used Hofstede cultural dimensions model to understand the business and legal environment of Saudi Arabia. Taking a qualitative methodological approach, they aimed to explore mainly the role of Islam as the dominant religion in Saudi Arabia in shaping Saudis' values, norms and behaviours. They concluded that power distance plays a major role in Saudi behaviours, Saudis prefer to take managerial positions since it is embarrassing to have labour jobs. Cassel and Blake classify Saudis as a collectivistic society where the relationship between families is strong, and this has a negative effect on business. Specifically, in recruiting, when Saudis prefer to hire family members, relatives, and friends instead of highly qualified employees.

This is still true, particularly within the business sector and some parts of the private sector. However, in the public sector and large corporations such as Aramco, the biggest oil company in the world, employers prefer to avoid hiring relatives and friends to prevent corruption. In other words, they believe that hiring family or friends could potentially lead to corrupt practices, so they choose to avoid such hiring practices as a preventive measure. Crown Prince Mohammed bin Salman issued an order to eradicate corruption in the country. Members of the royal family, ministers, and businessmen were under investigation due to potential corruption. Some of them pleaded guilty and the other signed a settlement to pay back all the money they received from corruption. Crown Prince Mohammed bin Salman said according to Mazen Alkhamous, the Chairman of the Anti-Corruption Commission in Saudi Arabia, that the next move is to eradicate corruption that happening among managers. Middle managers hiring relatives and friends in the government and large corporations is now considered corruption in Saudi Arabia (Ahsarg al-Awsat, 2019).

Cassell and Blake (2012) argue that uncertainty avoidance also plays a big role in Saudi behaviours. Since Saudis' scores are high in this dimension, which means that they avoid risk-taking as much as possible, and as a result, Saudis prefer to make group decisions instead of individual decisions. Optimism also plays a big role in Saudi's decisions to start their businesses, and there is a cultural and religious belief common in Saudi Arabia that being optimistic will lead to positive outcomes. Yet, a high level of optimism could lead to negative consequences, such as taking high risks and overestimating positive outcomes while underestimating negative outcomes (Trevelyan, 2008).

Bird (1988), in his study, which was conducted in the USA context, explored that some factors could influence intentions. These factors include social, political, and economic factors. In addition, Bird lists other factors that might influence an entrepreneur's intention, such as their personal history, personality, analytical cause-and-effect thinking, as well as intuitive, holistic, and contextual thinking. Other studies have also explored cultural and social factors that influence EI. For example, entrepreneurship education, optimism, family exposure to entrepreneurship, society's valuation of entrepreneurship (Ozaralli *et al.*, 2016), and social networking sites all contribute to entrepreneurial intention (Alayis *et al.*, 2018). These factors could influence both the perceived desirability (attitude to act) and perceived feasibility (perceived behaviour control), which eventually could lead to EI and EA.

Ozaralli *et al.* (2016) argue that the economic and political conditions in a country play a big role in people's decisions to start a new business. For example, high inflation, a high unemployment rate, high taxes, corruption, and availability of funds could all discourage students from taking action to be entrepreneurs. Therefore, they hypothesized that students in the USA and Turkey who think the economic and political conditions in their home country will be better in the coming 5 to 10 years will have higher EI and their hypotheses were supported.

However, to the best of the researcher's knowledge, there is no scale in the literature that measures these social and societal factors in combination. Therefore, it seems that there is a need to develop a scale that measures the attitude toward the rules and regulations that are helpful or not for new entrepreneurs, perceptions of the entrepreneurship government support programs, and whether the political and economic conditions are encouraging or discouraging. Creating this scale would help to improve the TPB model as the model does not consider these factors as antecedents to the EI. The development of a new scale in research is important in terms of advancing our understanding of phenomena. Creating a new scale offers a solution to the challenges by tailoring the measurement tool to the specific aspect of the construct. By constructing a new scale, researchers can tailor instruments to measure the unique facets and dimensions of the construct, therefore allowing a more reliable and valid examination. As such, the development of a new scale represents a vital strategy to drive scientific progress by advancing the precision of measurement, fostering a deeper understanding of the construct, and promoting robust research examinations (DeVellis & Thorpe, 2021).

Based on the possible positive relationship that exists between SAS and EI, the following hypotheses will be tested as an attempt to improve the TPB model by adding the SAS variable to the other variables. This scale's validity and reliability is shown in Chapter Four.

H8: A positive relationship exists between SAS and EI.

H9: A positive relationship exists between SAS and ATB.

H10: A positive relationship exists between SAS and SN.

H11: A positive relationship exists between SAS and PBC.

H13: ATB mediates the relationship between SAS and EI.

H14: SN mediates the relationship between SAS and EI.

H15: PBC mediates the relationship between SAS and EI.

Ozaralli *et al.* (2016) assumed that students were influenced by their close families, friends, and relatives. Based on a review of previous studies examining the link between successful parents or immediate family members and the student's EI, Ozaralli *et al.* (2016) hypothesized that students from the USA and Turkey cultures whose immediate family members have started businesses will have higher EI. Also, those whose immediate family members have been successful as entrepreneurs will have higher EI. It was found that both USA and Turkish students whose immediate family members have started a business and have been successful have a significantly higher intention of being entrepreneurs, compared with students who have non-entrepreneurial parents. Therefore, the researchers conclude that their hypothesis is supported. Based on this study and the reviews of other studies (eg. Chen *et al.* 1998), it seems that having immediate entrepreneurial family members, such as parents or siblings, influence entrepreneurial activities. According to Hofstede (2010), Saudi Arabia is a collectivistic society, which means that when students graduate, they can get financial support from their parents who are successful business owners. This would increase both the desirability and feasibility of becoming an entrepreneur; eventually, they may develop intentions for starting a business. Therefore, the following hypothesizes will also be tested to see if such a relationship exists.

H18: A relationship exists between parents as business owners and EI.

H20: A positive relationship exists between parents who receive high income and their children's EI.

## 2.7 COVID-19 and EI

The COVID-19 pandemic has been considered one of the most serious events since the Second World War for both developed and developing countries (Liñán et al., 2022). The rapid spread of the virus around the world resulted in terrible health and financial consequences. Lockdowns and social distance rules were applied, travel bans were issued, and many countries' borders were closed. Fear spread everywhere, especially during 2020 when no vaccine against the virus had been approved. Since that time, and as far as the researcher is aware, only two studies investigated whether COVID-19 discouraged or encouraged EI among potential entrepreneurs (Ruiz-Rosa et al., 2020; Gomes et al., 2021).

Ruiz-Rosa et al. (2020) were interested in measuring social EI in the Spanish context before and during the pandemic period. The researchers sent a survey to university students to collect quantitative data. A total of 558 responses were collected: 324 before the COVID-19 crisis and 234 during the crisis period (February and June 2020). Similar to previous studies investigating EI, the researchers tested the validity of the TPB model. They initially found that 55% of the variance in social EI was explained by the TPB antecedents (ATB, SN, and PBC). This is a high R-squared finding, which is similar to the findings of other EI studies. For example, Kautonen et al. (2015) found that the TPB antecedents were all significant predictors of EI in the Finnish context (explaining 41% of the variance in EI). Therefore, the outcomes of Ruiz-Rosa et al.'s (2020) study validated the explanatory model of social EI from the TPB standpoint. In addition, a t-test of the mean differences in social EI was applied by Ruiz-Rosa et al. (2020) to see if the two samples were significantly different. The results demonstrated that the mean of social EI declined slightly during periods of severe socioeconomic crises and significant unpredictability, such as COVID-19. It should be noted that this study was conducted in a developed country (Spain), so results obtained from a developing country in the MENA region would be different due to the different economic and political conditions.

Similarly, Gomes (2021) studied EI among university students in the Portuguese context in two separate periods—before and during the COVID-19 pandemic—making this research original, as the author stated that it was the first study to examine academic EI during the COVID-19 pandemic in Portugal. To achieve this, a quantitative methodology was applied,

and students were handed questionnaires at the two-time points: 596 participated before the pandemic and 518 during the pandemic. The data were collected between April 2017 and October 2019 for the first sample and between June and December 2020 for the second sample. Like Ruiz-Rosa et al. (2020), Gomes (2021) applied the TPB model to test the relationship between the three antecedents (ATB, SN, and PBC) and EI. The results showed that both ATB and PBC impacted EI positively, whereas SN impact EI negatively. That is, 75% of the variance in EI was explained only by the ATB and PBC antecedents, as the negative relationship between EI and SN was weak (-0.03, nonstandard coefficient).

Contrary to Ruiz-Rosa et al.'s (2020) study, in Gomes's (2021) study, no change in EI was observed from before to during the pandemic. However, it should be highlighted that Ruiz-Rosa et al. (2020) focused on the intention of social entrepreneurship (creating non-profit organisations), whereas Gomes (2021) focused on the intention of creating an organisation to obtain profit or make an income. In addition to social, economic, and environmental conditions, the different principal purposes for creating an organisation in both studies might explain why the results obtained were different. That is, the interest in starting a non-profit organisation during the pandemic might be different from the interest in starting a for-profit organisation.

One critique of Gomes's (2021) study is the long data collection period for the first sample (between 2017 and 2019) compared with the shorter time for the second sample (June and December 2020). Whereas using a short time to collect the data in the second sample could be justified by the intent to collect the data during the pandemic, the two years of data collection in the first sample could have been affected by different environmental and economic conditions, which could have changed the attitudes of participants who participated in 2017 and 2019.

The GEM report, which was published in 2021, highlighted the level of EI during the COVID-19 pandemic across 30 countries (see Figure 2.2). According to the GEM report (2021), more than four in five adults in Angola and more than one in two in three additional Middle Eastern and African economies, two from Latin America and the Caribbean, and Kazakhstan intended to start a business in the next three years following 2020. Less than one in ten people in nine European economies anticipate launching a firm in the next three years,

highlighting Europe’s poorer entrepreneurial culture during the pandemic and more positive EI in the developing world.

Figure 2.2: EI during the COVID-19 pandemic across 30 countries.

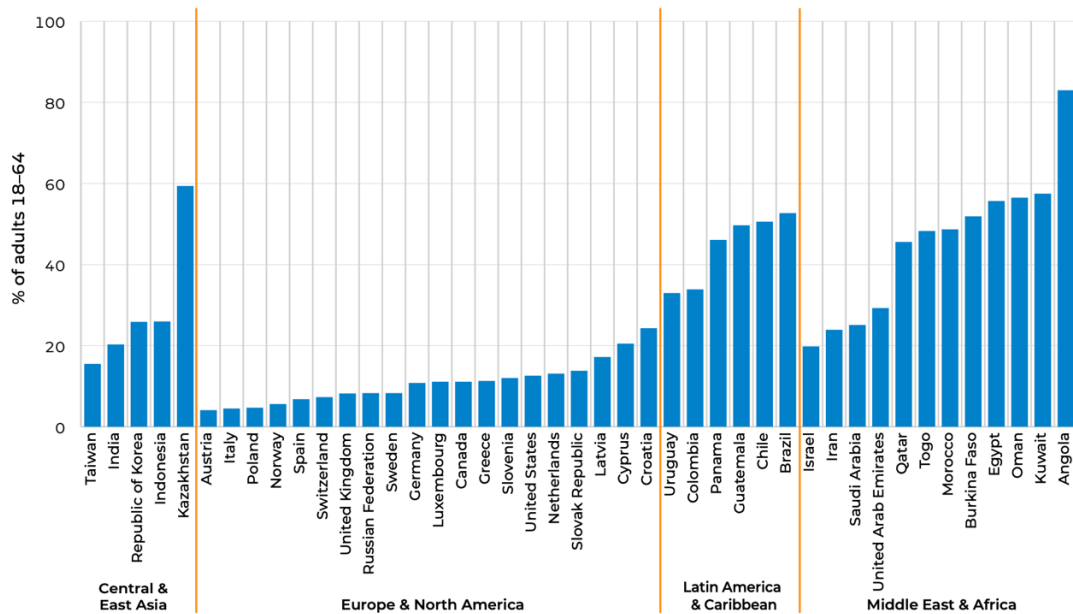
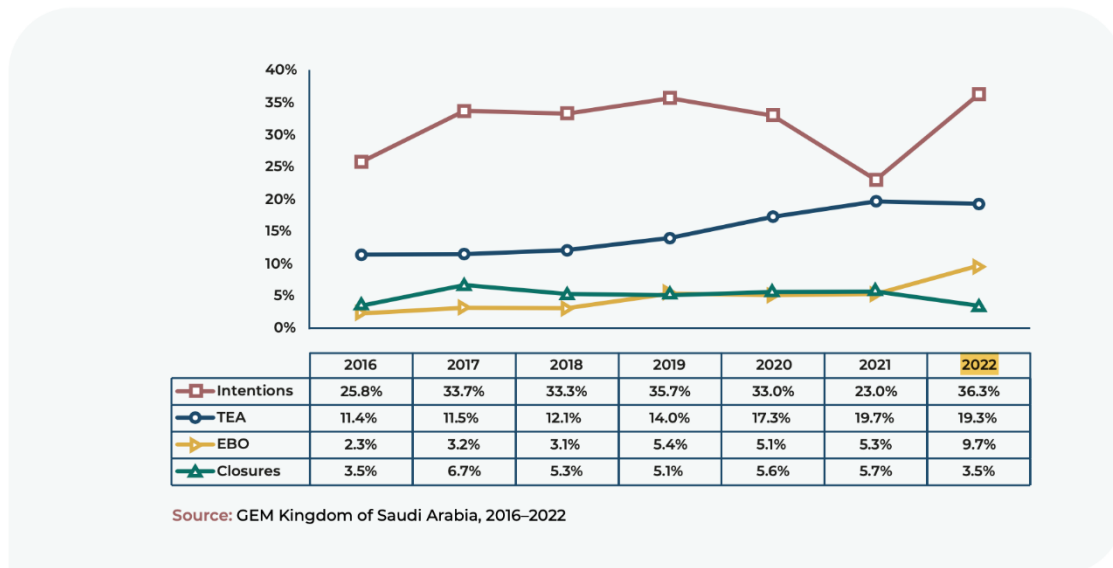


FIGURE 2.6 “Are you expecting to start a business in the next three years?” (% of adults aged 18-64 agree)

The most recent GEM report that was published in 2022 demonstrates the change in the level of EI in the Saudi context since 2016 (see Figure 2.3). It should be highlighted that the GEM team surveyed the adult population aged 18 to 64 and not only the younger population, which was planned for this thesis. Therefore, the level of EI in the GEM report would be different as the sample included those who were already employees after finishing their studies and some former public sector employees who are required to retire at the age of 60.

Figure 2.3: The EI in Saudi Arabia 2016-2022 based on the GEM report.





According to the GEM report (2022), in Saudi Arabia, the level of EI rose sharply in 2017, then remained largely constant until 2020, even during the period of lockdowns and uncertainties. However, the year 2021 showed a significant drop in the level of EI. Then, the level of EI recovered in the year of 2022. Before this recent GEM report was published in 2022, the researcher had expected and hypothesised that the level of EI would be lower during the COVID-19 restrictions than after the restrictions were lifted due to the logical expectation that these retractions, such as social distancing and travel bans, would decrease the level of EI among young Saudis. However, the results and findings in this thesis show the opposite and are consistent with those presented in the recent GEM report (results are provided in Chapter Five).

## 2.8 The Saudi Arabian Context

As one of the world’s largest oil producers, most of Saudi Arabia’s revenues come from oil exports (GEM, 2022). Increases in oil prices, combined with high demand, have contributed significantly to the nation’s wealth (Aloulou, 2016). This wealth has helped the Saudi government to stimulate the economy and create more job opportunities for its citizens, especially in the public sector. However, with a growing Saudi population and fluctuating oil prices, the government has begun to realize the danger of remaining an oil-based economy (Saudi Vision 2030 report, 2018). Crown Prince Mohammed bin Salman stated that “we will not allow our country ever to be at the mercy of a commodity price volatility or external market” (Saudi Vision 2030 report, 2018, p.7). Therefore, in 2016, the Crown Prince introduced the Saudi 2030 vision, which focuses mainly on increasing non-oil exports,

improving the quality of citizens' lives, and supporting small and medium enterprises (SMEs).

Supporting SMEs is an important lever in lowering the country's unemployment rate. According to the General Authority for Statistics (GASTAT), the total population of Saudi Arabia in 2022 was approximately 32 million, about 18.8 million of whom were Saudis (50.6% male and 49.4% female). The number of non-Saudis population was 13.4 million (76.5% male and 23.5% female). Three million and seven hundred Saudis are currently employed in the private and public sectors (about 1.5 million in the public sector and 2.2 in the private sector). This data does not include workers in the security and military sectors. About seven million non- Saudi labour work in the private sector and about 96 thousand workers in the public sector (GASTAT, 2022).

According to GASTAT (2022), unemployed youth comprise 8% of the Saudi population. Two hundred fifty-four thousand Saudis graduate from university every year (135,000 females and 118,000 males) (Saudi Arabian Monetary Agency [SAMA], 2018); in 2019, the number of Saudi job seekers in Saudi Arabia was about 1.2 million (GASTAT, 2022). Neither the public sector nor large companies in the Saudi market will be able to employ all Saudi graduates in the coming years. Also, Saudi graduates could not replace all non- Saudi employees since most non-Saudi workers are in low-wage employment such as working on construction. The Annual Saudi government revenues in 2018 amounted to approximately 905 billion Saudi riyals (\$241 billion), while expenditures were about 1,079 billion riyals (\$288 billion). Approximately 45% of these expenditures are compensations and salaries for Saudi government employees (SAMA, 2018). As a result of this deficit in the Saudi budget, and the government's plan to focus on increasing capital expenditure spending instead of operating expenditure (2030 Vision report, 2018), the Saudi government will be unable to afford to hire more graduates. Also, since large and medium companies face many economic challenges—such as new rules and regulations, including a new Saudi tax system and the global pandemic situation (Coronavirus, COVID-19)—they will not be able to hire all of these graduates.

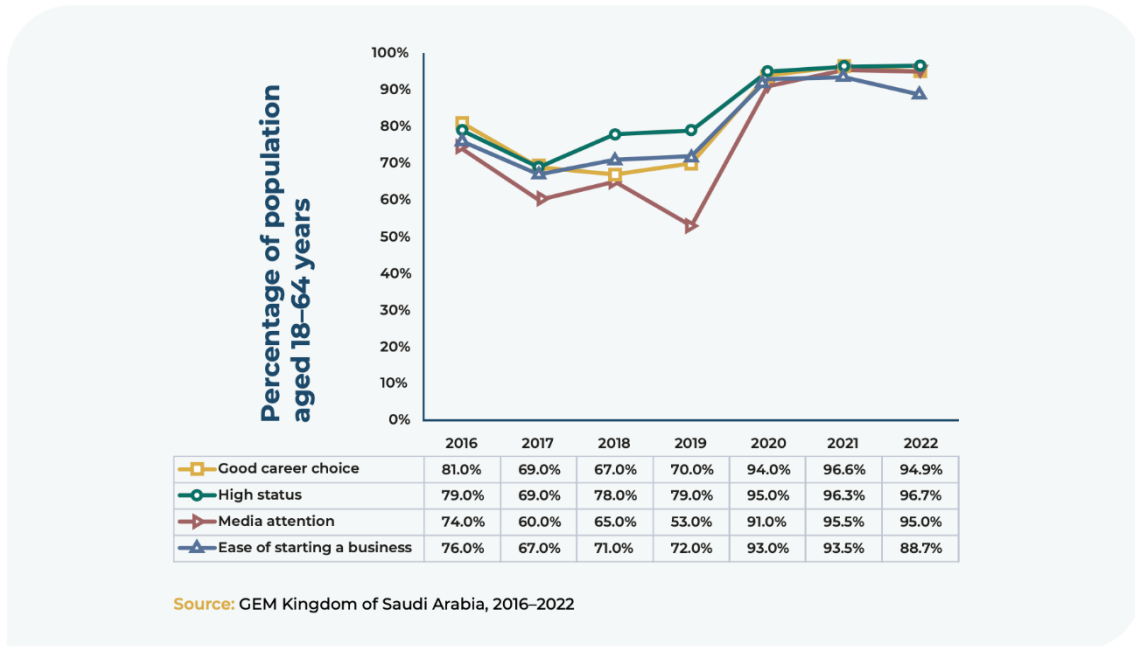
The “Saudi Arabian oil” report conducted by McKinsey and Company (2015) noted that, as the population of Saudi Arabia is increasing, by 2030 the country will need to have significantly improved its economic growth to create six million jobs for the young

population. To address this issue, the Saudi government decided to focus on supporting existing SMEs and promoting innovation and entrepreneurship. This would result in an increased number of SMEs, which would help to create new job opportunities and thus lower the unemployment rate (2030 vision report, 2018).

According to the General Authority for Statistics GASTAT (2022), as of 2022, about 10 million people (about 54% of the Saudi population) were under 25 years old. The Saudi government believes that young Saudis are ambitious and willing to better the Saudi economy. Crown Prince Mohammed bin Salman stated that “our real wealth lies in the ambition of our people and the potential of our younger generation” (2030 vision report, 2018 p.7). Therefore, promoting entrepreneurship and SMEs creation among young people would help to create more job opportunities for them.

The GEM team recently surveyed the adult Saudi population (ages 18-64) in 2022 to determine Total Early-Stage Entrepreneurship Activity (TEA). TEA includes nascent entrepreneurs (including those in the process of setting up a business and those who have started a business in the past three months) and new business owners (from 3 months to 3.5 years). The results of the survey, for which the sample comprised about 4,000 adults. The GEM report finding demonstrates that such activity remains low (19%) compared to other Arab countries. The GEM report also shows that 36% of the Saudi population intended to start a new business in the next three years, while 95% of the Saudi population think that starting up a business is a good career choice, and 89% think that starting up a business is easy (see Figure 2.4). In addition, 88% of the Saudi population thinks that there will be good opportunities to start up a business in their communities (GEM, 2022).

Figure 2.4: Societal attitudes of the adult population in Saudi Arabia, 2016–2022



These findings suggest that Saudi Arabia is an attractive market for new entrepreneurs and that a large number of Saudis intend to start up a business. Furthermore, the GEM results indicate that 97% of the Saudi population thinks that new, successful business owners enjoy a high level of social status and respect. Although Saudis were found to be optimistic about starting up a business, entrepreneurial activities are still low when compared to the level of EI based on the recent GEM report published in 2022. Therefore, it is worth investigating and searching for the reasons for the existence of this gap and such results would be applied and generalized to other developing countries facing the same issue.

## 2.9 Conclusion

The literature review in this chapter started by exploring the concept and the process of entrepreneurship. This has helped to identify a definition of entrepreneurship that fits with research questions, objectives and the scope of this study. Then, the researcher identified an existing research gap among the EI and EA studies, which allows for better planning for this research. In addition, reviewing the role of national culture and SAS in the individual choice to become an entrepreneur allows a better understanding of the focus of this study. Moreover, reviewing the recent COVID-19 literature helped understanding the impact of this health crisis on the EI around the world and in the Saudi context. The following chapter illustrates the methodological approach and the strategy used to achieve the research objectives.

## **Chapter Three: Research Methodology**

### **3.1 Introduction**

Having presented the literature review in the previous chapter, this chapter will show the research methodology. First, the research philosophy will be explained, followed by the research approach, methodological choice, research design, research population and sampling, questionnaire design and interview questions, and data analysis. Finally, ethical considerations and the researcher's reflection on the chosen methodology will be provided.

### **3.2 Research Philosophy**

Saunders et al. (2019) define ontology as “assumptions about the nature of reality” (p. 133). Different people or groups have different views on the reality of the world. Saunders et al. (2019) provided an example of different assumptions that the UK's residents have regarding the UK's European Union membership and the path to leaving the European Union (Brexit). One group sees Brexit as an advantage to the nation because of the bureaucracy and the high cost of being a European Union member. Another group assumes that remaining in the European Union would help protect workers' legal rights and help with free trade between European Union members. Like Saunders et al.'s (2019) example, in the United States, the two political parties have different views about what is good and bad for the economy. On one side, the Republicans think that cutting taxes for large business owners leads to higher demand and growth and eventually allows these organisations to hire more employees. On the other side, Democrats assume and believe that supporting low- and middle-income families financially will better foster the US economy. Additionally, in academia, researchers have different ontological assumptions about or views on the reality of the world that guide them to engage in different research fields (Creswell, 2013).

According to Smith, (2019), “A piece of research that lacks a clear ontology, epistemology or methodology cannot withstand critical review” (p. 62). Hence, it is important to illustrate both the researcher's ontological and epistemological assumptions before investigating the link between EI and EA. In social science research, a debate exists between researchers regarding the continuum of the three ontological positions. The internal realism position holds that there is only one reality, and knowing this reality directly is impossible. However, researchers can obtain indirect evidence to support them in understanding reality. On the

other hand, the relativism position holds that there is more than one truth or reality, and knowing this truth is linked to the context of where the study takes place and the time at which the study is conducted. Against the previous two positions, the nominalism position holds that no truth exists and that people try to create different kinds of truths using language and by giving names and labels to what they experience in their lives (Smith, 2019).

### **3.2.1 Positivism and social constructionism**

Saunders et al. (2019) state, “Epistemology refers to assumptions about knowledge, what constitutes acceptable, valid and legitimate knowledge, and how we can communicate knowledge to others” (p. 133). A debate also exists between social science researchers regarding how they should conduct their research. The two epistemological positions, positivism and social constructionism are the most frequently used by social science researchers (Smith, 2019). “Positivism relates to the philosophical stance of the natural scientist and entails working with an observable social reality to produce law-like generalisations” (Saunders et al., 2019, p. 144). Positivists hold that “the social world exists externally, and that its properties can be measured through objective method” (Smith, 2019, p. 66). Therefore, positivist researchers agree that they are value-free and that they are external to and detached from the data findings. In other words, their values do not influence the data findings (Saunders et al., 2019). They use measurements, numbers and statistics as they test the relationships between different variables to provide explanations or evidence to support or counter existing theories or models (Creswell et al., 2013; Saunders et al., 2019).

On the other hand, social constructivists hold that people need to understand the society in which they live and work. They believe that people create subjective meanings of their lives and experiences. Due to the diversity and multiplicity of these meanings, researchers in this position focus on the complexity of viewpoints rather than try to categorise or organise them. The research objective is to rely as heavily as possible on the participants’ perceptions of the situation under investigation. To enable the participants to construct the meaning of a scenario, the researcher’s questions must be broad and open, and the researchers must carefully listen to what people are saying or doing in their everyday environments. The researchers’ cultural backgrounds and historical experiences shape their understanding of the participants’ answers. Hence, they are not detached from the data findings, unlike positivists (Creswell, 2013).

Ontologically, positivism fits with internal realism, and social constructivism fits with nominalism (Saunders et al., 2019). Positivists tend to use quantitative methods, such as surveys. Collecting data using these methods is quick and affordable, and when large samples of data are statistically analysed, the results can have a significant impact on policy decisions. However, these methods do not help understand what value or mean people attach to actions and in creating new theories. They are limited in providing sufficient explanations for the observed outcomes. On the other side, social constructivists use qualitative methods, such as interviews or focus groups. Applying these methods can help in understanding the participants' meanings and feelings, which could help in understanding the issues or problems in more depth. They are also helpful in finding new theories. However, collecting data using these methods is time-consuming and requires funding and resources. Above all, these methods are sometimes less credible to policymakers as they rely on feelings and opinions—and being subjective (Smith, 2019).

As the positivism and social constructivism philosophies have weaknesses and limitations, a recent philosophical position emerged at the end of the twentieth and beginning of the twenty-first century, called pragmatism (Saunders et al., 2019). Pragmatism fits between internal realism and relativism ontological positions (Smith, 2019), and pragmatists believe that there are many ways of understanding the world and conducting research. They believe that no one perspective can ever provide the full picture and that there could be multiple realities (Saunders et al., 2019). They do not necessarily concentrate on a single method to conduct research. Instead, they focus on understanding the research problem by applying one or more methods or approaches available to better acquire knowledge about the problem under investigation. Pragmatist researchers select the study methodologies, strategies and procedures that best suit their requirements and objectives. Pragmatists often apply a mixed-methodology approach (quantitative and qualitative), but mixed-methods researchers must define a purpose for their combination of methods, a justification for why it is necessary to combine quantitative and qualitative data (Molina – Azorin, 2016; Creswell, 2013).

Applying a mixed-methodological approach by holding to the pragmatism philosophical position has its advantages and disadvantages. A mixed-methods approach provides more credible and valid results as each quantitative or qualitative approach is employed to compensate for the limitations of the other. They can integrate exploratory and confirmatory research simultaneously. They can be used to examine competing theories critically, and they

can offer stronger and better inferences. However, they require more time and money than studies that use only one method. Their utilisation necessitates a strong overarching design, and the researcher must be competent at applying both techniques (Smith, 2019; Molina – Azorin 2016).

### **3.2.2 Justification of Research Philosophy**

In the case of investigating the link between EI and EA, the pragmatism philosophical position would help the researcher to achieve the research objectives and answer the research questions. Previous researchers who tried to investigate the gap between EI and EA using longitudinal studies were able to successfully determine that EI does not necessarily lead to EA (e.g., Kautonen et al., 2013, 2015; van Gelderen et al., 2015; Gielnik et al., 2014). However, they admitted that they were not able to answer the question of why the participants had not taken EA even though they had intended to do so. These researchers only took the positivist position when they conducted their research as they only used quantitative methods, such as surveys, to collect their data. The first objective of the research in this thesis was to determine the level of EI among the young population and to test the validity of the TPB model in the Saudi context. This can be achieved by taking the positivist position and applying the quantitative methodology approach. The second objective was to learn if university students transformed their EI into EA after they finished their studies. This can also be achieved by using surveys and taking the positivist position. However, by taking the positivist position, the researcher would not be able to achieve the rest of the research objectives, which are understanding what could prevent graduating university students from transforming their EI into EA and learning the role of social and societal factors in helping or hindering the transformation of EI into EA. Therefore, the social constructivism position should be taken here. As pragmatists do whatever it takes to understand the research problem and to better acquire and share valuable knowledge (Creswell, 2013), their philosophical position is appropriate to investigate the gap between EI and EA.

The ontological assumption would be between internal realism and relativism. In testing the validity of the TPB model, it is assumed that there is only one possible reality, which is the assumption that ATB, SN and PBC antecedents or variables are associated statistically with EI. Knowing this reality directly is not possible, but finding indirect evidence would help to understand this reality. Hence, the internal realism ontological position would be appropriate



here. Moreover, investigating the reasons behind the existing EI and EA gap requires the assumption that there is potentially more than one reality and that context and time are important when studying a problem such as the EI and EA gap in the Saudi context during COVID-19. Hence, the relativism ontological position would be appropriate here.

### **3.3 Research Approach**

Deduction, induction and abduction are three research approaches, and according to Saunders et al. (2019), determining the appropriate approach depends on the researcher's philosophical choice and chosen research topic. Positivists prefer the deduction approach (reading through rich literature initially and then testing the validity of a theory or model in one or more contexts by using measurement and statistics), social constructivists or interpretivists prefer the induction approach (collecting data initially using qualitative methods, such as interviews, and then interpreting the subjective meanings in an attempt to generate a new theory), and pragmatists prefer the abduction approach (using deduction and induction together). In this thesis, the researcher takes the pragmatism position, so the abduction approach is more appropriate for investigating the link between EI and EA. That is the researcher will take the deduction approach when testing the validity of the TPB model in the Saudi context, and then he will take the induction approach by conducting interviews and trying to understand the subjective meanings that would lead to explain the quantitative finding in more detail.

### **3.4 Research Design**

A research design is a plan for how to achieve the research objectives and how to answer the research questions. It includes selecting between different choices regarding what to search for and how (Smith, 2019). The researcher in this thesis planned to use a different methodological approach to investigate the EI and EA gap. The mixed-methods approach—specifically, the explanatory sequential mixed-methods design—would help the researcher answer the research questions and explain why those with EI do not take EA. It would also help to explain some of the quantitative findings. According to Creswell (2013), this design involves two data collection phases: The first phase involves a quantitative method to find results, whereas the second phase involves a qualitative method to better explain those results. In other words, the quantitative results are collected and analysed separately, after which the qualitative data are collected and analysed.

This design is also called compensatory design, where each of the quantitative and qualitative methods is employed to compensate for the weaknesses of the other. As the qualitative method is limited when it comes to generalising the findings to the rest of the population, the quantitative method is also limited in its ability to explain why such outcomes are obtained (Smith, 2019). Molina–Azorin (2016) also states that in the implementation of data collection using sequential design, where quantitative data is collected first and qualitative data collection follows, the goal might be to evaluate variables with a large sample and then, during the qualitative phase, examine them in further detail with a few examples. Smith (2019) notes that for quantitative studies the leading US publications, such as the *Academy of Management Journal*, started to value methods that include statistical relationships between variables that are supplemented with quotes from numerous interviews that concentrate on the mechanisms and processes that might explain the observed outcomes.

### **3.4.1 Quantitative, longitudinal data**

In addition to applying a mixed-methods approach, the researcher applied a longitudinal data collection that included two waves of data collection, similar to those applied by Kautonen et al. (2013, 2015) and van Gelderen et al. (2018). Longitudinal surveys allow researchers to examine changes over time and developmental trajectories, by collecting data at multiple time points. With this research design, researchers can attempt to establish causality and identify the direction of relationships between variables (Gustafsson, 2010). This was to help answer the second research question in this thesis (Do university students transform their EI into EA after they finish their studies?). The proposed time lag between the two waves was six months, which might be too short to capture the EI and EA of the participants. However, in longitudinal studies investigating the intention and action gap, many scholars suggest using a short duration. In the longitudinal study (30 months) conducted by Gielnik et al. (2014), the researchers found that 50% of those who intended to start a business during the first wave of the study (0 months) undertook many EAs in the six months that followed the first wave. They also found that goal intention, when combined with high action planning, helps in creating a new venture and that this effect wears off after 12 months. For this reason, Gielnik et al. (2014) recommended using a shorter time in future studies. Ajzen (1985) suggested that only a short time is required for intentions to become actions. The six-month time lag is also in line with the longitudinal study of van Gelderen et al. (2018). The maximum period for intention to affect entrepreneurial behaviour is between 12 and 14

months; after this time, nascent entrepreneurs either start their businesses or abandon the idea (Reynolds and Curtin, 2009).

In the first phase, a survey was administered to test the validity of the TPB model—a well-established model used by many researchers focusing on EI. When designing the first-wave survey, the researcher aimed to build upon the TPB model by adding the SAS antecedents to the ATB, SN and PBC antecedents to test its relationships with these variables and the EI variable. This improvement required the development of a new social and societal factors (SAS) scale as the literature showed that no SAS scale was available (more explanation was provided in Chapter Two pages 40 and 41).

The second phase of data collection began six months after the students' graduation date. In this wave, a short survey was administered to determine whether these students had taken any EA. These actions include, for example, developing a business plan (written or unwritten), developing a product or service, planning marketing efforts, talking with potential customers, collecting information about competitors, producing financial projections, approaching financial institutions or other people for funds, dealing with administrative issues related to starting a business and acquiring equipment, supplies, premises, or other concrete items (Kautonen et al., 2015).

### **3.4.2 Qualitative, semi-structured interviews**

Adams (2015) highlights the importance and effectiveness of semi-structured interviews across a range of important tasks, particularly when dealing with multiple open-ended questions that necessitate in-depth exploration. Specifically, the utilisation of semi-structured interviews is highly recommended in the following scenarios:

- Semi-structured interviews offer a unique advantage in facilitating the articulation of exploratory, open-ended questions. These questions explore the individual perspectives held within a group, providing important evidence for complex explorations.
- They prove invaluable in collecting data on sensitive or delicate topics that respondents may be hesitant to openly discuss in a group setting, such as during focus group sessions. This approach encourages more sincere and in-depth responses.

- When conducting a formative program evaluation, semi-structured interviews become indispensable. They allow for one-on-one interactions with key program personnel, staff members, and frontline service providers. This personalised approach yields better understanding and constructive feedback.

### **3.4.3 Justification of the mixed methods approach**

In mixed methods research, semi-structured interviews can enhance and complement other approaches. Here are specific scenarios where their application is particularly beneficial:

- Before designing a large-scale survey, leading the agenda for a focus group, or formulating an overarching research strategy, thorough preliminary research is essential. Semi-structured interviews provide the depth of understanding required for informed decision-making in these initial stages.
- In the process of developing a standardised survey questionnaire, researchers often encounter critical questions that demand more extensive exploration and in-depth probing. Semi-structured interviews are important in refining these questions.
- Sometimes, despite rigorous analysis of survey data or evidence gained from focus groups, certain unexplained phenomena, or persistent "mysteries," require further investigation. Semi-structured interviews serve as a valuable approach for exploring deeper into these investigations, uncovering underlying complexities.

According to Adams (2015), semi-structured interviews are a dynamic and adaptable research method and well-suited for various critical research tasks. Their ability to facilitate in-depth exploration, gather sensitive information, and complement other research approaches makes them an important tool in research.

The researcher in this thesis conducted face-to-face semi-structured interviews with those who had EI in the first phase but who had not yet taken any EA after six months, as well as with those who had EI in the first phase and had taken EA after six months. This follow-up aimed to identify what was preventing these students from acting and what was helping them to act, which would help to answer the third research question (What could prevent graduating university students from transforming their EI into actions?). In addition, it aimed to explain some of the quantitative findings in more detail.

The need for a mixed-methods approaches and longitudinal surveys in research is often debated due to their distinct characteristics. A mixed-methods approach allows researchers to gather both qualitative and quantitative data. It enables researchers to triangulate data from different sources, enhancing the validity and reliability of the findings. Qualitative data can be used to explore complex phenomena by providing rich understanding and helping to explain quantitative results in depth, while quantitative data can confirm or reject hypotheses generated from qualitative findings (Morse, 2016). Given the nature of this research and the background of the researcher of this study, it is more appropriate to apply the mixed-method research design to address the research questions of this study.

Longitudinal survey is a research method used to study changes in individuals or groups over time. Unlike cross-sectional studies, which collect data at a single point in time, longitudinal studies track participants over time, allowing researchers to observe trends, patterns, and developments at different points in time. An overview of longitudinal studies and their main characteristics are as follows.

1. Longitudinal survey studies involve collecting data from the same individuals or groups at multiple points in time. Participants are usually assessed or interviewed at regular intervals, such as every year, every two years, or specific milestones (such as after five years). This repeated measurement allows researchers to capture changes and continuity in behaviours, attitudes, and other variables of interest over time.

2. Longitudinal survey studies can cover periods ranging from a few years to decades, depending on the research question and objectives. Some studies are longitudinal, tracking participants from childhood or adolescence to adulthood, while others focus on shorter periods, such as the effects of interventions over months or years.

3. In a longitudinal survey design, the same individuals or groups are tested repeatedly over time. This approach allows researchers to examine individual trajectories and identify factors that influence stability or change in results. Panel studies require that participants be attracted and retained throughout the study to ensure data quality and validity.

4. Longitudinal survey studies can be prospective, in which data collection begins at the beginning of the study and continues, or retrospective, in which researchers collect historical data from past time points (e.g., using archival records or retrospective interviews).

Prospective designs allow for more control over data collection but may take longer.

Retrospective designs, on the other hand, allow researchers to more effectively study long-term trends.

5. Longitudinal data analysis involves examining patterns of change, stability, and change in data over time. Researchers use statistical techniques such as growth curve modeling, multilevel modeling, and latent growth curve analysis to analyse longitudinal data and test hypotheses about factors driving growth trajectories.

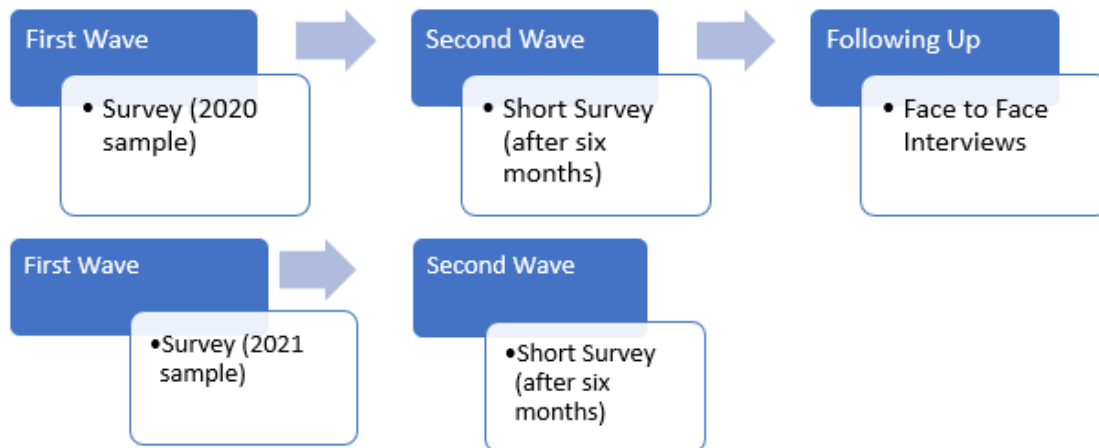
6. Longitudinal survey studies have several advantages, including the ability to study developmental processes, identify causal relationships, and track changes over time at the individual level. However, it also faces challenges such as participant attrition, logistical complexity, and potential bias caused by selective dropouts and attrition.

These studies are an important research tool for studying long-term trends, developmental trajectories, and the effects of interventions and policies on individuals and groups at different stages of the life cycle.

### **3.5 Research Strategy**

Recognising that the original data collection occurred during a period of unprecedented economic and social uncertainty – during the global COVID-19 pandemic, a decision was made to repeat data collection and analysis once many of the restrictions imposed during the COVID-19 pandemic had been lifted. According to Saunders et al. (2019), “the main strength of longitudinal research is its capacity to study change and development” (p. 212). The Second was to confirm the high R-squared result that was found after analysing the association between the TPB antecedents (ATB, SN and PBC) and the EI variable (the analysis of the first phase of 2020). The Third was to confirm the evidence found in the 2020 sample that the SAS variable is correlated with the TPB antecedents and the EI and to confirm the validity and reliability of the SAS scale the researcher created. Fourth was to be able to compare the results of the second phase (the short survey) of the 2020 sample with the 2021 sample. Ultimately this decision was taken to make the findings more robust. The following process graph would simplify the intended design.

Figure 3.1: The process of the research design.



### 3.6 Data Collection

#### 3.6.1 Population and Sample

A full list of all the cases in the target population from which the sample will be drawn serves as the sampling frame for any probability sample (Saunders et al., 2019). In the quantitative part of this research, it was not possible to determine the sample frame exactly as the researcher did not have a complete list of all potential participants. The researcher only had lists of students at King Abdulaziz University. According to Saunders et al. (2019), it will be impossible for every case in the target population to have a chance of selection if the list is incomplete or erroneous because some cases will have been left off. The lists that the researcher received from King Abdulaziz University were complete lists of male and female business students who were in their final term. Therefore, every case had an equal chance to participate in the study. Hence, probability sampling could be used in this case with full confidence. At the other Saudi universities, King Saud University, Imam Mohammad Bin Saud University, and King Faisal University, the Deanship of Scientific Research administration teams promised to send out the survey via their systems to all business students who were in their final term. Based on their reassurances, the researcher assumed that each of their students had a chance to participate in the study and that using probability sampling would also be appropriate in this case.

The target population in this research was bachelor students in their final term and studying business subjects at Saudi universities. The sample that was taken only represents students

who were studying at public universities as the researcher was not able to collect data from private universities. Moreover, it was not possible to generalise the results to all students in Saudi Arabia as the sample was biased towards students from the west and middle of Saudi Arabia (Riyadh and Jeddah). There is also a chance that those who participated in the survey were students interested in entrepreneurship. If this is the case, then generalising the results to all business students would be wrong, and therefore, the sample would represent only those interested in entrepreneurship.

According to Saunders et al. (2019), when it is impractical or unnecessary to obtain data from the complete population, sampling is used. In this research, a sample of 301 was taken from the 2020 phase and a sample of 231 from the 2021 phase. The researcher was not able to determine the exact size of the research population. However, the number of Saudi students who graduated in 2018 from all universities in the country was about 253,000 (135,000 female and 118,000 male) (SAMA, 2018). Unfortunately, SAMA does not provide how many of these students were business students and this information was not available on the universities' websites. Therefore, it was not possible to know the exact population number or the number of students who received the invitation to participate in the survey to determine the exact response rate. The only number of business students the researcher had was from King Abdulaziz University, taken from the lists provided by the dean of the college. The 2020 list had 824 students, and the 2021 list had 909 students. Therefore, the response rate at this university was 21% in 2020 and 18% in 2021. According to Saunders et al. (2019), "estimating the likely response rate from a sample to which you will be sending a questionnaire or interviewing is more difficult. One way of obtaining this estimate is to consider the response rates achieved for similar surveys that have already been undertaken and base your estimate on these" (p. 304). Therefore, the researcher based his estimation on the response rate taken from King Abdulaziz University. However, it should be highlighted that the researcher was able to send a first and second reminder to the students from the lists, asking them kindly to complete the survey. On the other hand, the researcher had no control over reminding the students from other universities to complete the questionnaire. Hence, the estimation of the response rate from the other universities is less accurate.

In the qualitative follow-up part of this thesis, non-probability sampling was used. According to Oliver (2004), "the purposive sampling process may seek to identify people who, because of their experience or contacts, have special insight into the research question" (p. 129). The



interviewed participants were those who had EI and were willing to participate in the follow-up phase. These participants, compared with the other participants, might have experienced the process of transforming EI into EA, so their answers would help in answering the research question of what is preventing young graduates from taking EA. Hence, the purposive sampling process fits with the qualitative sample.

### **3.6.2 Pilot study**

Before starting data collection, it was important to conduct a pilot study to see if the planned design was feasible. It is also important to reflect on whether the researcher obtained any value from this and whether it enabled the researcher to improve the overall data collection strategy (Oliver, 2004). The main concern was that the research design would not help in answering the research questions and achieving the research objectives as this longitudinal mixed-methods design had not been used by previous researchers focusing on the EI and EA gap. The second concern was that the research measurements might lack reliability and consistency, especially the SAS scale the researcher developed, which had not been tested in previous studies. The third concern was regarding the follow-up interviews and whether they would help in explaining what prevented the graduates from taking EA.

After developing the first-wave survey and getting approval from the ethics committee at the University of East Anglia on 15 February 2020, the pilot study was conducted between 24 and 29 March 2020, six months after the researcher's PhD journey began. First, the survey was sent to 34 male and female students studying business subjects at King Abdulaziz University, Jeddah, Saudi Arabia. The dean of the Faculty of Economics and Administration approved the study to be conducted and provided a list of male and female students who were in their final term, along with their phone numbers and email addresses (note that the researcher is a lecturer at this college, so it was easy for him to contact the dean directly and get the student list). During the time the pilot survey was sent, a national lockdown was implemented, and everyone was asked to stay and work from home to prevent the spread of the COVID-19 virus. Oil prices were very low (about \$22 per barrel). As the Saudi government depends on oil revenues to pay their expenses, the government planned to cut the salaries of government employees. A ministerial decision was announced that allowed private sector businesses to cut employees' salaries up to 40% and to terminate employee contracts when necessary. Therefore, the unemployment rate was expected to increase.

Twenty-four students participated in the pilot survey (16 male and 8 female). Part of the pilot was to offer the survey in both languages to ensure that the items were fully understood. The data were entered and analysed using SPSS software. The descriptive results showed that 19 participants completed the survey in Arabic, and only 5 participants completed it in English, even though all participants knew English. Therefore, from the pilot, the researcher learned that it was necessary to provide the survey in both languages.

### **3.6.3 Main study 1 - First phase of data collection (the 2020 sample)**

Before COVID-19, the researcher planned to go to Saudi Arabia to collect the data directly from students studying business subjects at universities in the west, east, north, south and middle of the country. It was planned initially to collect a sample of 1,000 participants to avoid the attrition problem of previous longitudinal studies focusing on the EI and EA gap (e.g., Kautonen et al., 2013, 2015). However, lockdowns, travel restrictions and home-schooling his children prevented the researcher from traveling. Hence, the researcher decided to collect the data online while he was in the UK.

After completing the pilot, editing the survey, and obtaining ethics committee approval, the researcher immediately began the first phase of data collection (between 18 November 2020 and 02 February 2021). At that time, students were working from home. Social distance rules were applied. Wearing masks was mandatory on streets and in public places. There was uncertainty about the Saudi economic situation as the Saudi government increased the value-added tax (VAT) from 5% to 15%. Many people in the private sector lost their jobs, and some of their salaries were cut. Many businesses failed because of a lack of demand during the lockdown period. No vaccine against COVID-19 was yet approved, and restrictions on traveling and self-isolation were applied. Thus, the data were collected during this time of the pandemic, which might have influenced the participants' EI and trust in the economy.

First, the researcher received approval from the dean of the Faculty of Economics and Administration at King Abdulaziz University to conduct the study among business students. The dean's office provided a list of male and female students who were in their final term, including their phone numbers and email addresses. Furthermore, the researcher had to obtain approval from other Saudi universities to conduct the study among their students. As the

COVID-19 restrictions and work-from-home rules were applied during that time, the researcher contacted most public and private Saudi universities by email and phone (about 23 universities). However, only King Saud University, Imam Mohammad Bin Saud University, and King Faisal University responded (public universities offering a free education). The Deanship of Scientific Research administration teams at these universities approved the study to be conducted among their students, but they did not provide a list of final-year students who were about to graduate. Instead, they sent out the survey via their systems to the targeted research samples. For this reason, the researcher was not able to determine the survey response rate from these universities. To increase the number of survey participants, the researcher relied on his connections and networking with other lecturers teaching at Saudi universities and asked them to help circulate the survey among their students. Most of them were happy to help, but they were concerned about sending the survey to their students without approval from their universities and asked the researcher to directly contact the Deanship of Scientific Research administration team. The researcher tried many times to contact them but unfortunately received no response.

As the researcher received a list of female and male students studying at King Abdulaziz University, he sent a welcome message with the survey link to their phone numbers using WhatsApp. The researcher thought that using WhatsApp to communicate with students would be more efficient than email and would help increase the number of survey participants. However, some students, especially female participants, did not like to be contacted on their private phones, even though the researcher is a lecturer at the same college, and Saudis currently tend to use WhatsApp to professionally communicate and conduct work and business. Moreover, some participants were concerned that clicking on the links could lead their phones to be hacked, which could impact their privacy, so they asked to be contacted by email instead. Hence, the researcher decided to send an email to each student on the list who had not completed the survey using WhatsApp. Many participants, especially females, appreciated being contacted by email, and many of them replied to the email and wished the researcher good luck. The fact that men and women seem to respond differently might be culturally influenced but it evidences why researchers need to be flexible in collecting data and not make assumptions about what approach will work. Researchers need to be prepared to adapt and offer options, that fit the pragmatic approach applied in this thesis (Molina–Azorin, 2016).

In total, 579 Saudi students participated in the survey, but only 302 responses were appropriate to include in the data analysis. The rest were incomplete responses (176 participants), students who were already business owners (22 participants), students who were not in their final term (54 participants), master's and PhD students (12 participants), and students from different colleges, such as law (13 participants).

### **3.6.4 Main study 1 - Second phase of data collection (the 2020 sample)**

The second phase took place between 13 September 2021 and 05 October 2021 (seven months after the end of the first phase). The plan was to start collecting the data six months after the end of the first wave (on 02 August 2021). However, the researcher contracted COVID-19 just before starting the data collection and had to self-isolate for 10 days. In the first phase of the 2020 sample, 135 out of 302 participants had agreed to participate in the second phase. Hence, they had provided their phone numbers. Initially, the short survey was sent to the 135 participants as a broadcast using WhatsApp. Only two of the 135 participants completed the survey, which was disappointing. Then, the researcher decided to text the participants privately using WhatsApp; he tried to convince them about the importance of the study and told them that the survey was short and would only take about three minutes to complete. This approach was successful in increasing the number of responses to 28 participants. The researcher sent two follow-up reminders, increasing the number of responses to 50 participants. The main purpose of collecting the data in this phase was to determine the number of those who had intended to take steps to start a business but had not done so. Therefore, to increase the participant number, the researcher contacted privately those who had not participated and asked them kindly to answer only one question: Have you taken any of the above steps or similar steps during the past six months? You only need to answer "yes" or "no". Thirty-two participants answered the question, increasing the total number of participants to 82 (60% of the 135).

Some students were happy to participate and remembered the researcher from when he had sent the survey seven months before. Some had forgotten that they had completed the survey and asked the researcher to stop contacting them and bothering them. One participant was concerned about his privacy and said, "I am happy to help, but I will not click on any web link because I do not want my phone to be hacked". Hence, the researcher offered a PDF copy of the survey, and he was happy to complete it.

### **3.6.5 Main study 1 - Follow-up interviews**

While collecting the short survey data, the researcher started to follow up with and interview those who were willing to participate. They had been asked in the short survey if they were willing to participate in the interviews. Of the 50 participants who completed the short survey, 28 were happy to participate in the interviews. Thus, the researcher contacted them immediately to schedule the interviews, but only 12 participants were confirmed (9 male and 3 female). Six of them had taken some steps to start a business, and six had not. As the Saudi culture is still conservative in some parts of the country, some female participants were not comfortable having an interview with a male researcher. Only three females living in the west of Saudi Arabia (Jeddah and AL Madinah) agreed to participate with the condition that the camera would not be turned on during the interviews.

Most of the follow-up interviews were phone interviews. Only two male participants agreed to a video call. One participant decided to withdraw his answers. The researcher tried to convince him that the answers he had provided would be confidential, as indicated by the information sheet, but he refused. Therefore, his answers were withdrawn before starting the data analysis. The researcher had made it very clear on the Interview Information Sheet that participants could withdraw after the interviews if they wished. The researcher had also explained that the participants' identities would be anonymous, and the information they provided would be used only for the study, but the participant was not comfortable (This is discussed in more detail in the ethics section link).

### **3.6.6 Main study 2 - First phase of data collection (the 2021 sample)**

This phase started on 19 October 2021 and ended on 21 January 2022. At this time, more than 70% of the Saudi population had received their COVID-19 vaccine. The Saudi government announced that getting two vaccines were required to travel by plane and train or to enter government agencies, shopping centres, banks and companies. There were only about 35 COVID-19 cases per day. Oil prices increased to around \$85 per barrel. This has significantly contributed to the economic improvement. This increase in oil prices has injected a substantial improvement into the economy, leading to increased revenue for oil-producing nations and providing a stimulus for economic growth and stability. The higher prices have led to improved profitability within the oil industry, fostering investments, job

creation, and overall economic prosperity. This positive economic impact extends beyond the oil sector, as increased revenues often translate into government funds that can be allocated to critical infrastructure development, public services, and various other sectors, thereby enhancing the overall economic well-being of the nation. Life was almost back to normal. Wearing masks was not mandatory. Students had returned to schools and universities, except for those who were between 5 and 12 years old. The borders were opened, and a third vaccine jab was offered to anyone aged 18 years and older. Even the Riyadh Season, which includes music concerts, festivals and other entertainment activities, was open. No social distance rules were applied when attending these activities. Hence, the data were collected under different COVID-19 conditions. Therefore, the participants' views on the pandemic were probably different than the participants' views when the data had been collected during the COVID-19 restrictions (the 2020 sample).

Again, the researcher started by getting approval from the Saudi universities. Emails were sent to Saudi universities. It was more difficult to get responses from the university administration teams compared with during the COVID-19 work-from-home period. When work-from-home rules were applied, the university employees were more active in responding to their emails. Only the King Saud University (in Riyadh, the capital) team responded and promised that they would help and distribute the survey among the business students using their system. The dean's office at King Abdulaziz University (Jeddah City, west) again provided a list of the business students who were in their final term. As the researcher had learned from collecting the 2020 sample data that contacting the students by email suited the participants better than texts, he emailed each one of the students on the list privately (909 students) and asked them kindly to participate in the survey.

By 24 November 2021, about 280 students participated in the survey, and about 200 of them met the sample criteria and could be used for analysis. However, on 25 November 2021, a new COVID-19 variant called Omicron appeared in South Africa. There was no certainty that the vaccines would work against the new variant. The UK government canceled all flights coming from South Africa. Face masks became mandatory again in public places. Saudi Arabia followed suit and canceled flights coming from the infected areas in South Africa. This raised a concern for the researcher that the new COVID-19 variant might change the start-up attitudes and EI among participants who would participate after the appearance of the Omicron variant. However, life in Saudi Arabia remained normal as no restrictions were

applied to indoor or outdoor activities. Self-isolation was only required among positive cases. Therefore, the researcher decided to continue collecting the data until 30 December 2021, when the Saudi government announced that wearing a mask was required indoors and outdoors. Social distance rules were reinstated indoors and outdoors as a result of the increase in COVID-19 cases resulting from the spread of the Omicron variant (about 2,000 cases a day). Hence, the researcher decided to end the survey. By this date, 349 had participated, and 231 cases met the sample criteria and were included in the data analysis.

### **3.6.7 Main study 2 - Second phase of data collection (the 2021 sample)**

In this phase, the short survey was again sent privately to the participants by text using WhatsApp. Seventy-six of the 229 participants from the first phase of 2021 were willing to participate in the second phase of 2021. After sending the survey and two reminders, 28 completed answers were returned. Then, the one question (Have you taken any of the above steps or similar steps during the past six months?) was sent, and 14 answered it, yielding 42 participants in total (40% of the 229). This phase started six months after the end of the first phase of 2021 (between 12 July 2022 and 26 July 2022). This was the end of the long journey of collecting the research data.

## **3.7 Questionnaires and Interview Design**

### **3.7.1 Longitudinal Survey**

The first-phase survey begins with a welcome page. On this page, additional information and details about the study are provided to the participants in both Arabic and English, as well as information about privacy, ethics and data protection. The welcome page is followed by the Informed Consent Agreement. The survey consists of three sections. The first section includes demographic questions such as gender, age and place of study. This section also has filter items to determine the participant's degree and nationality, whether the participant will graduate this term, and whether they currently own businesses. The second section starts with the definition of entrepreneurship and the meaning of taking steps to start a business. This is to ensure that participants are aware of the concept of entrepreneurship implemented in the study. This section also has a single question that assesses whether the level of EI is strong, medium, or weak, followed by items related to the evaluation of scales of the TPB model (EI, ATB, SN and PBC). The third section includes the SAS scale items, with 5-point Likert scale

answer options ranging from 1 (strongly disagree) to 5 (strongly agree). Finally, an item was added to ask the students to provide their contact information if they were willing to participate in the following phase of the research (a short questionnaire). Copies of the survey questions, applied measurements, additional information and privacy note sheets are provided in Appendix 1, Appendix 2, Appendix 4, and Appendix 5.

The short follow-up survey also starts with a welcome page, followed by asking the participants if they have taken any steps to start a business in the past six months. If the participant's answer is "yes", an additional question will be shown asking the participant to indicate which steps they have taken. If the answer is "no", additional questions ask the participant about their attitudes regarding potential EA barriers. Finally, the participants are kindly asked to provide their contact information if they are willing to participate in follow-up interviews. A copy of the short questionnaire is provided in Appendix 6. All the survey questions were translated from English into Arabic by the researcher. To ensure that the translation would not affect the meaning, the researcher received some help from his wife, who is a PhD student. She kindly translated the survey items back from Arabic to English. Then, the researcher compared her translation with the English version of the survey. When a difference was found, the researcher retranslated the item to make sure the meaning was the same.

### **3.7.2 Interview**

The semi-structured interview questions were developed and piloted before running the first- and second-phase surveys in 2020, they were refined as key themes emerged in the analysis of the 2020 longitudinal data. The semi-structured interview format is more flexible than structured interviews, hence, participants were given the chance to speak informally (Creswell, 2013). Also, the researcher was able to understand the subjective meanings of the participants by asking follow-up questions. Some of these questions aimed to provide answers to the question "What could prevent graduating university students from transforming their EI into EA in the context of developing countries?" Additional questions aimed to provide more explanations for some of the quantitative findings. As the data were collected during the COVID-19 pandemic, questions were also created to understand the graduates' feelings and opinions regarding the role of COVID-19 in helping or preventing



them from transforming their EI into EA. Copies of the interview questions in both Arabic and English are provided in Appendix 8.

### 3.8 Reliability test

A reliability test was conducted to test the consistency between the items in each scale. Although the pilot sample was small (24 participants), the internal consistency and reliability estimated using Cronbach's alpha suggest that most scales had good-to-excellent internal consistency and reliability (ranging from 0.71 to 0.89). Kline (1996) recommended an alpha coefficient  $> 0.70$  for a scale to be reliable. Only the alpha coefficient of the PBC scale was  $< 0.70$ . However, as this scale has been tested in previous studies and as the pilot sample included only 24 participants, the researcher decided to keep the scale as it is. Table 3.1 shows the reliability results for all scales.

Table 3.1. Reliability for the pilot sample.

Variable	$\alpha$
1. EI	0.89
2. ATB	0.85
3. SN	0.71
4. PBC	0.55
5. SAS	0.84

The researcher was also concerned about the number of students who would agree to participate in the second phase and the follow-up interviews as these students would have graduated and might not want to contact the researcher six months after graduation. Therefore, the participants in the pilot were asked to provide their contact details if they were willing to participate after six months. Of the 24 participants, 12 (50%) provided their contact details and were happy to participate (8 male and 4 female). Eight male and two female participants were willing to participate in the follow-up interviews. This gave the researcher a good indication that the participants would be happy to participate in the second phase when the data were collected.

Six months later (between 26 October 2020 and 16 November 2020), the researcher contacted those who were willing to participate in the second phase and sent a message to their phone numbers including a welcome text and a survey link for them to participate. The purpose of this phase was to see whether the participants had taken any EA during the six months after graduating. Nine participants completed the short survey, and only one participant had taken EA. However, the researcher realised that he would not be able to determine which of these participants had intended to take steps to start a business before. Hence, therefore a question was added to the short survey, asking the students to provide their phone numbers so the researcher could locate the participants' answers from the first phase results.

In the meantime, the researcher followed up with two male participants and interviewed them to ask what had prevented them from taking EA. Then, the researcher transcribed the interviews and translated them into English to see if the participants' opinions and feelings would help in answering the research questions. Initially, the researcher planned to interview only those who had intended to take EA but had not done so six months after graduating. However, after conducting the pilot, it was clear that there was also a need to interview those who did take action because they would also be facing challenges and difficulties preventing them from transforming their EI into EA. Conducting these interviews benefitted the researcher in gaining experience conducting interviews and refining some of the interview questions. The above details and explanations provide an example of the benefits a researcher can gain by conducting a pilot study.

### **3.9 Data Analysis**

#### **3.9.1 Survey data analysis**

IBM SPSS Statistics 27.0 was used to analyse the survey data in each phase of the quantitative part. Analysing the first phase of the 2020 and 2021 samples started with descriptive statistics, including frequency analysis of the demographic items, followed by the minimum, maximum, mean, standard deviation, skewness and kurtosis statistics for the main study variables. Then, an exploratory factor analysis (EFA) was used to determine the factor structures of the measures of ATB, SN, PBC, EI and SAS for both samples. This analysis aimed to identify common dimensions among the variables and reduce data complexity.

Following the EFA, descriptive statistics were calculated to provide a summary of the central tendency, variability, and distribution of the study variables. Inferential statistics were then employed to explore the relationships between variables. Correlation analysis was first used to examine the relationship between the study variables, allowing for an initial assessment of the strength and direction of these relationships.

Regression analysis was subsequently conducted to further investigate the associations between the study variables. This analysis aimed to determine the extent to which predictor variables predict the outcome variable, controlling for potential confounding variables. Then, to statistically test the change in EI during COVID-19 restrictions and after these restrictions were eased, regression analyses and t-tests were performed.

To further elucidate the relationship of the SAS variable with other variables, a mediation analysis was performed using the PROCESS macro tool developed by Hayes (2013). This analysis allowed for the examination of whether the effect of one variable (e.g., SAS) on the outcome variable (e.g., EI) is mediated by another variable (e.g., PBC).

### **3.9.2 Interview Data Analysis**

Having explained the data collection process, it is important to also explain the data analysis processes (Oliver, 2004). Thematic analysis is a commonly recognized qualitative research method that facilitates the exploration and interpretation of patterns within textual data. Rooted in grounded theory, the thematic analysis aims to explore meaningful patterns and themes present in the data that allow researchers to obtain a better understanding of the phenomenon. This method provides a flexible and systematic approach to organizing the arguments and understanding complex narratives, making it appropriate for exploring various research questions across disciplines (Guest et al., 2011).

In thematic analysis, researchers analyse the data through repeated reading and familiarization, aiming to capture the richness and depth of participants' experiences and perspectives (Boyatzis, 1998; Guest et al., 2011). This process involves open coding, where initial codes are assigned to segments of data, and then codes are grouped into potential themes. Subsequently, themes are refined and revised iteratively as the researcher becomes familiar with data analysis. This iterative process allows for the emergence of salient themes

that capture the main patterns and concepts present in the participants' narratives (Boyatzis, 1998; Guest et al., 2011). Thematic analysis also emphasizes the importance of reflexivity, encouraging researchers to be aware of their own biases and assumptions that might influence the interpretation of the data.

Using a thematic analysis approach for the creation of the themes is useful in terms of obtaining a better understanding of participants' experiences, perspectives, emotions, and actions. It allows for the exploration of both explicit and implicit meanings embedded within the data, thereby contributing to the development of theories, models, or practical recommendations (Boyatzis, 1998; Guest et al., 2011; As a method that can accommodate a variety of data sources, including interviews, focus groups, surveys, and even visual materials, thematic analysis remains a critical tool that provides rich evidence about the complexities of human experiences (Tracy, 2019).

To analyse the qualitative part, the researcher adopted thematic analysis utilising the ATLAS program and following the guidelines and steps set out by Braun and Clark (2006). The six phases of thematic analysis employed in the research are as follows.

1. Familiarisation with the data.
2. Coding the data.
3. Generating initial themes.
4. Reviewing and developing themes.
5. Refining, defining and naming themes.
6. Producing the report.

First, the researcher transcribed the data personally to engage and become more familiar with them (Braun and Clark, 2006). Then, all the transcripts were uploaded to the ATLAS software, which can read and deal with Arabic transcripts. The data were analysed in Arabic, and the codes were written in English. Initially, 378 codes were generated, which were then grouped into 30 initial themes and subsequently reduced to six main themes. At a later stage, the extracts that represent the themes and sub-themes were translated into English. The following figures (Figure 3.2 and Figure 3.3) provide an example of coding the data and generating initial themes.

Figure 3.2: Example 1 of coding during the qualitative data analysis.

The screenshot shows a document titled 'Par 04' with Arabic text. The text discusses entrepreneurial intentions and the role of family. Several coding tags are visible on the right side of the document, such as 'Opportunity driven, solving a costumers problem. Saudi productions as one of the Saudi vision.', 'Early entrepreneurial actions', 'The importance of Surveing ...', 'Entrepreneurial intention bef...', 'Starting up a business durin...', 'Business is in the right direc...', 'Family as a business owners', 'Parents is a business owners', 'Business is better than empl...', 'Graduates preference to star...', 'parents as a role model', 'parents as a source for busi...', 'Parents as business owners ...', 'Parents is a business owners', 'parents support', 'The importance of employe...', 'working as an employee and...', 'working as an employee and...', 'working as an employee is ...', 'working as an employee to L...', and 'Ecommerce is the dominance'.

Figure 3.3: Example 2 of coding during the qualitative data analysis.

Name	Size	Comment	Creator
Ecommerce	19		Abdulmo
Employement	22	07/03/2022, 10:21, merged with Employment...	Abdulmo
Entrepreneurial Actions	8		Abdulmo
Entrepreneurial Intention	21		Abdulmo
Entrepreneurship and Business ed...	18		Abdulmo
Experince	15		Abdulmo
Factors that lead to think about st...	8		Abdulmo
Family Financing	12		Abdulmo
Fear of Faliure	10		Abdulmo
Gender	5		Abdulmo
Government support	24		Abdulmo
High expectation that family will s...	1		Abdulmo
Income	9		Abdulmo
Knowledge	24		Abdulmo

### 3.10 Ethical Considerations

According to Oliver (2004), researchers must treat study respondents with care, tolerance and respect for their humanity. Many steps were taken in this study to deal with ethical issues raised during data collection. First, as the researcher works as a lecturer at King Abdulaziz University, there was a concern that the students might think that completing the survey was compulsory to complete their degree requirements. Hence, on the welcome page of the surveys, the students were informed that participating in the survey was optional and that they could withdraw from the study without any consequence. They were also informed that their decisions on whether to participate would not affect their current or future relationship with the researcher or anyone else at the University of East Anglia (UEA), King Abdulaziz University, or other Saudi universities.

Furthermore, the participants were made aware of the nature of the study on the Research Information Sheet and were given an Informed Consent Agreement before they started the surveys. The main purpose of providing this agreement was to help the students decide whether to participate in the study (Oliver, 2004). Moreover, a link to the Privacy Note (Appendix 2) was provided on the welcome page informing the participants that the information they offered would be used only for the study. Additionally, students were aware that their identity would remain anonymous. The researcher also provided his email address, giving the students the chance to ask any question if they wished. In addition, before conducting the interviews, the researcher provided an Interview Information Sheet to the participants and gave them enough time to read through it and raise any questions or concerns. Copies of the Informed Consent Agreement, the Privacy Note, and the Interview Information Sheet are provided in Appendix 3, Appendix 2, Appendix 7.

### **3.11 Conclusion and Reflection on the Chosen Methodology**

This chapter outlines the methodology adopted in this study, beginning with the research philosophy, followed by the research approach, design, strategy, data collection methods, questionnaire and interview design, reliability testing, data analysis procedures, and ethical considerations. Next, the researcher will outline some of the challenges encountered.

Applying the mixed-methodology approach by using a longitudinal study was not an easy task. One of the biggest challenges the researcher faced was keeping up with the research action plan. Hence, time management was key to achieving this plan as this study had to be

conducted over four years. Therefore, the researcher was committed to following his action plan despite the distraction of COVID-19. A copy of the action plan is provided in Appendix 9.

Another challenge the researcher faced was the necessity to learn both quantitative and qualitative research skills to achieve the research objectives. This requires hard work and is time-consuming, especially for a researcher who is new to the research field. However, instead of seeing this as an obstacle, Molina–Azorin (2016) sees it as a chance for the researcher to develop new skills and to think differently as they solve complex issues and problems.

Furthermore, data collection was intertwined with the data analysis many times as this research design method requires multiple data collecting procedures in a specific time. For example, as the researcher was analysing the qualitative data, he was required to collect the survey responses in the first phase of the 2021 sample. This was challenging, especially during the COVID-19 period, when the researcher was required to home-school his daughter and take care of two babies at home because the nursery had closed. At the same time, he was learning statistics, conducting the pilot study and collecting the first-wave data, and analysing the findings. Therefore, future PhD researchers who plan to use a mixed-methods approach must be able to work under pressure and should be patient. In the context of a pandemic, it is crucial to maintain flexibility as plans may need to adapt and change. The next chapter will provide the research findings.

## **Chapter Four: Findings from the Quantitative Analysis (EI Findings)**

### **4.1 Introduction**

The primary aim of this thesis is to investigate and provide evidence about the entrepreneurial intentions and action gap among university students in the Saudi context. The research questions guiding this study are as follows:

**Research Question 1:** To what extent are the TPB model and its antecedents, including the SAS, valid in the Saudi context?

This research question investigates the applicability of the TPB model and its associated antecedents within the unique socio-cultural context of Saudi Arabia. By examining the validity of this well-established model, we aim to determine whether it effectively explains the factors influencing entrepreneurial intentions and actions among Saudi university students. To address these research questions, we will use a quantitative research design, specifically utilising a cross-sectional research design. This approach will allow us to gather data at a single point in time from the diverse characteristics of participants, enabling an analysis of the factors influencing entrepreneurial intentions and actions among university students in the Saudi context.

**Research Question 2:** Do university students in Saudi Arabia transform their EI into EA after completing their studies, and how TPB model and its antecedents including SAS influence this process?

This question focuses on the dynamic transition from EI to EA among university students in Saudi Arabia. We seek to understand whether the intentions nurtured during their academic years translate into concrete entrepreneurial actions once they graduate. This exploration will shed light on the practical outcomes of their educational experiences about entrepreneurship intention and actions. We have selected a longitudinal approach to investigate this research question, as it offers advantages for this study. A longitudinal approach involves the collection of data from the same participants over an extended period, allowing for the tracking of changes and developments over time.



**Research Question 3:** What factors prevent graduating university students in Saudi Arabia from transforming their EI into EA, and how do these factors associate with the components of the TPB model including SAS?

In addressing this question, we aim to identify the barriers and challenges that may hinder graduating university students in Saudi Arabia from realising their entrepreneurial actions. By examining these obstacles, we can provide fruitful evidence for the development of support mechanisms and strategies to facilitate the transformation of EI into EA. This research question will be addressed using a qualitative research design. The choice of a qualitative research design is driven by the need to explore the barriers and challenges of Saudi students, gather rich and contextual data, and gain a deeper understanding of how cultural factors interact with the TPB model and its antecedents.

This chapter presents the survey results concerning EI. Following the methods outlined in the Methodology chapter, the aim of this chapter is to present the results of the cross-sectional survey data. The central question addressed here pertains to the validity of the TPB model and its antecedents within the Saudi context. By analysing this quantitative data, we can understand how well the theoretical ideas match up with what happens in real life. This helps us establish whether the TPB model and its related factors make sense in the specific cultural and social setting of Saudi Arabia. This chapter aims to answer the first research question of this thesis: To what extent are the TPB model and its antecedents, including the SAS, valid in the Saudi context?

Various COVID-19 restrictions have been enforced to prevent the transmission of the COVID-19 disease across multiple countries (Armiya'u et al., 2022; Arslan & Yıldırım, 2021; Arslan et al., 2021; Ashraf et al., 2023; Batra et al., 2022; Green & Yıldırım, 2022; Hu et al., 2023; Moroń et al., 2023; Rehman et al., 2023). During the pandemic and its aftermath, Saudi Arabia also implemented a series of specific restrictions to prevent the spread of the COVID-19 disease. Initially, the country imposed strict lockdowns, which included curfews, limitations on movement between regions, and the closure of businesses and public spaces (Evenson et al., 2023). These measures were aimed at curbing the virus's transmission and protecting public health. Additionally, international and domestic travel was heavily restricted, with the suspension of flights and border closures (Alsofyani et al., 2020). As the situation evolved, Saudi Arabia gradually eased restrictions, allowing businesses to reopen

with capacity limits, implementing social distancing protocols, and making face masks mandatory in public areas (Shimul et al., 2021). The country also introduced a system of color-coded classifications to categorize regions based on the level of risk, with corresponding restrictions (Alhaidari et al., 2021). While progress was made with mass vaccination campaigns, the Saudi government continued to monitor the situation and adjust measures accordingly, reflecting a balance between public health and economic recovery efforts.

In reaction to the COVID-19 pandemic, Saudi Arabia implemented stay-at-home measures on March 15, 2020, and subsequently enforced a nationwide lockdown between March 23 and April 5, 2020 (Alfawaz et al., 2021). These measures have had adverse implications for individuals, businesses, and society on a large scale. Therefore, even considering the slight divergences that could hold practical implications within study variables like EI, it would be useful to understand the overall impact of the COVID-19 pandemic on EI across 2020 and 2021. Given this context and the successful application of the analysis on the individual datasets, the researcher's intention is to extend this analytical approach to combine datasets from both 2020 and 2021. Acknowledging the modest disparities present between the two datasets, which possess the potential to exert significant influence when combining distinct datasets, the researcher recognized the need to evaluate EI outcomes through the examination of dataset combinations to improve the overall generalizability of findings. This approach was successfully employed in previous research to validate the generalizability of findings (Alghowinem et al., 2016). Moreover, by combining the two data sets, it is possible to identify the overarching response patterns among participants regarding study variables (Frederiksen et al., 2007), thereby enhancing the validity of findings and increasing statistical power, while minimizing response biases.

That is to say, despite the different contexts and expectations, the results obtained from the 2020 and 2021 samples showed very similar results across the frequency analysis, factor analysis, descriptive statistics, reliability (see Appendix 10), correlation analysis, regression analysis, and mediation analysis (see Tables 4.5, 4.7 and 4.9). Therefore, the two data sets for the two samples were combined into one data set to improve the sample size. Some of the analysis described in this chapter was intended to test for similarities/differences between 2020/2021 (see subsections 4.3, 4.4, and 4.5) with the ultimate plan of combining the data from the two surveys.

## 4.2 Descriptive Analysis

Given the presence of common variables in both the 2020 and 2021 datasets, these two sets of data were merged following the rationale elucidated in the earlier introduction section. The merging process aimed to integrate the datasets by focusing on key variables that enable the analysis of information. After combining the data sets, the frequency analysis shows that the number of participants totaled 532 (54% female and 46% male). According to Saunders *et al.* (2019), ‘The larger your sample's size the lower the likely error in generalising to the target population’ (p. 299).

Table 4.1. Frequency analysis of the study variables.

Variable	Level	2020		2021		Combined	
		n	%	n	%	n	%
Gender	Male	155	51.50	84	36.4	241	45.13
	Female	146	47.50	145	62.8	291	54.49
	Prefer not to say	0	0	2	0.90	2	0.37
Age	18-24	244	81.06	200	86.6	444	83.62
	25-34	48	15.95	24	10.4	72	13.56
	35-44	8	2.66	5	2.2	13	2.45
	Prefer not to say	1	0.33	1	0.4	2	0.19
Business owner	No, but I have previously started a business.	67	22.26	39	22.26	106	19.96
	No, I am not a business owner, and I have never started a business.	234	77.74	191	77.74	425	80.04
Parent as business owner	Yes, father	70	23.26	47	20.3	117	22.03
	Yes, mother	13	4.32	4	1.7	17	3.20
	Yes, both	11	3.65	6	2.6	17	3.20
	None	207	68.77	173	74.9	380	71.56
Siblings as business owner	Yes, brother	43	14.29	25	10.8	68	12.78
	Yes, sister	20	6.64	13	5.6	33	6.20
	Yes, both	3	1.00	5	2.2	8	1.50
	None	234	77.74	188	81.4	422	79.32
	No response	1	0.33	0	0	1	0.18

Relatives as business owner	Yes, male relative	173	57.48	133	57.6	306	57.52
	Yes, female relative	32	10.63	26	11.3	58	10.90
	None	95	31.56	71	30.7	166	31.20
	No response	1	0.33	1	0.4	2	0.38
Parental income (SAR)	0–8,699	97	32.23	97	29.0	164	30.83
	8,700–19,999	111	36.88	111	39.0	201	37.78
	≥2,0000	91	30.23	91	31.2	163	30.64
	No response	2	0.66	2	0.90	4	0.75
Place of study	Universities in west Saudi Arabia	187	62.13	168	72.7	346	65.04
	Universities in central Saudi Arabia	107	35.55	58	25.1	157	9.51
	Other universities in Saudi Arabia	7	2.33	5	2.2	24	4.51

Note. 'n' denotes frequency, while '%' signifies the corresponding percentage.

The ages of the participants (84%) ranged from 18 to 24 years. All participants were studying in universities in Saudi Arabia, with nearly two-thirds (65%) of them studying in universities in the west of Saudi Arabia. They predominantly reported that they were not a business owner and had never started a business (80%). Of the participants, 72% reported that none of their parents (father, mother, or both) owned a business, with 79% of the participants reporting no business ownership by siblings. That is, although most of the sample does not have an immediate relative who is a business owner, more than 70% have a family member that owns a business. In addition, more than half (58%) of the participants reported having a male relative (not their father or brother) who is a business owner. Concerning parental income, 38% of the participants reported a parental monthly income ranging from 8,700 to 19,999 SAR (US\$2,329 to 5,333), while 31% reported 0 to 8,699 SAR (US\$0 to 2,319). That is to say, the majority of the participants can be categorized as middle-class. A detailed description of the participants is presented in Table 4.1. These findings present evidence about the demographic and contextual factors that may influence entrepreneurial intentions among university students in Saudi Arabia. Further research could explore the relationships between these variables and shed light on the motivations and challenges faced by this specific population in pursuing entrepreneurial intention and actions.

Table 4.2 provides key descriptive statistics, including minimum, maximum, mean, and standard deviations, for items on the variables of interest in this study, namely attitude toward behaviour, subjective norms, perceived behavioural control, entrepreneurial intentions, and social and societal factors. The findings revealed that the results showed that the mean for ATB ranged from 3.3 to 4.21, indicating moderately positive attitudes toward behaviour. The mean for SN ranged from 3.13 to 3.63, suggesting differing levels of perceived subjective norms. The mean for PBC ranged from 2.97 to 3.74, indicating moderate perceived control over behaviour. The mean for EI ranged between 3.4 and 3.67, signifying a moderate inclination toward entrepreneurial intention. Finally, the mean for SAS varied from 3.46 to 3.87, reflecting moderate social and societal factors. These findings suggest that participants generally exhibit moderately positive attitudes, varying subjective norms, moderate perceived control, moderate entrepreneurial intentions, and attribute a moderate level of influence to social and societal factors. These descriptive statistics are important for understanding the general characteristics of the study population and may have implications for designing interventions or strategies related to the behaviour of interest. Further analysis and exploration can provide a better understanding of the relationships and implications of these variables.

Table 4.2. Descriptive statistics and factor loadings for each item.

Item	Min	Max	Mean	SD	Skew	Kurt	Factor loading
ATB 1	1	5	3.55	1.03	-0.22	-0.73	0.80
ATB 2	1	5	3.80	0.98	-0.41	-0.56	0.85
ATB 3	1	5	3.30	1.16	-0.88	-0.91	0.79
ATB 4	1	5	3.76	1.01	-0.53	-0.37	0.89
ATB 5	1	5	4.21	0.91	-0.99	0.24	0.73
SN 1	1	5	3.13	1.17	-0.01	-0.87	0.90
SN 2	1	5	3.25	1.18	-0.10	-0.89	0.90
SN 3	1	5	3.63	1.07	-0.54	-0.32	0.73
PBC 1	1	5	3.74	1.01	-0.61	-0.08	0.80
PBC 2	1	5	3.61	1.00	-0.28	-0.52	0.82
PBC 3	1	5	2.97	1.15	0.15	-0.85	0.84
PBC4	1	5	3.18	1.10	-0.03	-0.75	0.79
EI 1	1	5	3.40	1.11	-0.20	-0.76	0.94
EI 2	1	5	3.45	1.12	-0.21	-0.80	0.96

EI 3	1	5	3.67	1.10	-0.51	-0.77	0.92
SAS 1	1	5	3.78	1.01	-0.78	0.43	0.82
SAS 2	1	5	3.78	0.95	-0.57	0.24	0.85
SAS 3	1	5	3.65	1.08	-0.55	-0.36	0.82
SAS 4	1	5	3.87	0.96	-0.70	0.30	0.82
SAS 5	1	5	3.46	1.05	-0.32	-0.25	0.66

ATB = Attitude Toward Behaviour; SN = Subjective Norms= PBC = Perceived Behavioural Control; EI = Entrepreneurial Intentions; SAS = Social and Societal Factors

Table 4.2 also presents skewness and kurtosis statistics, and factor loadings for each item on the respective factor. Using the values presented in Table 4.2, it is evident that the distribution of items exhibited no substantial violations regarding their distribution. This conclusion is drawn from the skewness values ranging from -0.99 to 0.15 and kurtosis values falling between -0.91 and 0.43. These values are consistent with the rule of normal distribution range of  $\pm 1$  as recommended by Tabachnick and Fidell (2012). Also, the factor loadings for each construct, including ATB, SN, PBC, EI, and SAS, ranged from [0.66 to 0.96]. These factor loadings signify robust associations between the items and their corresponding constructs, highlighting the strength of the relationships observed in the study. The following section discusses the factor analysis.

### 4.3 Factor Analysis

An exploratory factor analysis (EFA) was used to determine the factor structures of the measures of ATB, SN, PBC, EI, and SAS. In EFA, it is important to extract a number of factors. Factor analysis is a statistical technique used in research and data analysis for multiple purposes. First, factor analysis helps in reducing the dimensionality of data by identifying underlying factors or latent variables that explain the patterns of observed variables. This can make complex data more manageable and interpretable. It also simplifies the interpretation of data by summarizing a large number of variables into a smaller set of factors. This simplification can help researchers to determine the most important variables underlying the observed patterns (Kline, 1996,2015). Factor analysis helps in identifying how many underlying factors (latent variables) are present in a set of observed variables (survey items). In this study, the researcher aimed to enhance the TPB model by including the SAS antecedents alongside the existing variables (ATB, SN, PBC, and EI). This was done to investigate the relationships between SAS and these variables. Before this study, there was no

existing scale for measuring SAS in the literature. Therefore, it was necessary to create a scale that could effectively capture the SAS construct. Before using the SAS for data analysis, it was important to understand its underlying factor structures. Therefore, exploratory factor analysis was used to examine this structure and existing elements of TPB. That is, factor analysis was used to ensure the validity and reliability of the TPB model in the context of this study with the inclusion of the newly developed SAS scale and to explore the factor structure of all variables of this study.

To that end, several approaches have been recommended by researchers. The first approach is to determine the number of factors based on eigenvalues  $>1$  (Kaiser, 1960). In this approach, when an eigenvalue associated with a factor is  $>1$ , it can be considered a factor. The second approach is to use a factor loading of  $<0.40$  as the cut-off point for identifying the corresponding factor. That is, any items with factor loadings of  $<0.40$  are excluded, and only those with factor loadings of  $>0.40$  are considered meaningful loadings (Stevens, 2012). Finally, a scree plot was considered in the factor selection on the scale. The researcher in the analysis applied all these approaches in the assessment of the extraction of the number of factors.

The principal component extraction method with Promax rotation was adopted as an approach to simplify the interpretation of the factors. The researcher performed the five separate EFA on the measures for both samples (2020 and 2021 separately - the results of each the year 2020 and 2021 are shown in Appendix 10, Figures 10.1 – 10.5), and the results were almost the same. Therefore, only the results of the combined results will be shown here in the text.

The first EFA was performed on the ATB measure. For this measure, the value of the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.85, and the Bartlett sphericity test score was 1243.68 ( $p < .001$ ). This factor yielded an eigenvalue of 3.33, which explained 66.01% of the variance. The scree plot confirmed the one-factor solution as indicated in Figure 10.1 (see Appendix 10). The factor loadings ranged from 0.73 and 0.89 (see Table 4.2).

The second EFA was performed on SN. The EFA results showed that the value of the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.64, and the Bartlett sphericity test score

was 637.56.57 ( $p < 0.001$ ). This factor produced an eigenvalue of 2.16, which accounts for 72.07% of the variance. The examination of the scree plot verified the one-factor solution for this scale, as illustrated in Figure 10.2 (see Appendix 10). The factor loadings ranged from 0.73 to 0.91 (see Table 4.2).

The third EFA was performed on PBC. The EFA results for the PBC demonstrated that the value of the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.78, and the Bartlett sphericity test score was 773.06 ( $p < .001$ ). This factor generated an eigenvalue of 2.64, which accounts for 66.11% of the variance. The investigation of the scree plot also verified a clear one-factor solution for this measure, as reported in Figure 10.3 (see Appendix 10). The factor loadings ranged from 0.80 to 0.84 (see Table 4.2).

The fourth EFA was conducted on EI. The EFA for EI revealed that the value of the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.74, and the Bartlett sphericity test score was 1495.255.25 ( $p < 0.001$ ). This factor had an eigenvalue of 2.68, which explains 89.43% of the variance. The scree plot provided further evidence to support a one-factor solution for this measure, as shown in Figure 10.4 (see Appendix 10). The factor loadings ranged from 0.93 to 0.96 (see Table 3.1).

The final EFA was performed on SAS. The items that were created by the researcher, the analysis provided evidence that suggests the suitability of the factor analysis (value of the Kaiser-Meyer-Olkin measure of sampling adequacy = 0.80; Bartlett sphericity test score = 1138.81;  $p < 0.001$ ) for SAS. This factor had an eigenvalue of 3.18, which accounts for 63.71% of the variance. The scree plot provided evidence that supports a one-factor solution for this measure, as reported in Figure 10.5 (see Appendix 10). The factor loadings ranged from 0.66 to 0.81 (see Table 4.2).

Following the presentation of descriptive statistics for each item (see Table 4.2) and a factor analysis (see section 4.3 Factor Analysis) to assess the appropriateness of item grouping within their respective factors, we proceeded to calculate a total score for each variable. These total scores were then subjected to descriptive statistical analysis. This approach provided us with a better understanding of the overall characteristics of each variable, as well as evidence about their respective normal distributions tested with skewness and kurtosis



statistics (see Table 4.3). Table 4.3 present the minimum, maximum, mean, standard deviation, skewness, and kurtosis statistics for the variables used in the study. The data distribution was tested using skewness and kurtosis statistics. According to Tabachnick and Fidell (2012), values falling within the range of  $\pm 1$  for the skewness and kurtosis statistics indicate normal data distribution. As presented in Table 4.3, the skewness and kurtosis statistics for each measure fell within the suggested range of  $\pm 1$ . As such, deviation from normality cannot be a serious issue for the present samples, and the results suggested that the parametric tests were appropriate for the data analysis. (Details about the descriptive analysis for the years 2020 and 2021 are available in Appendix 10, Tables 10.3 and 10.4).

Table 4.3. Descriptive statistics for the analysed variables (combined data set).

Variable	Min	Max	Mean	SD	Skewness		Kurtosis	
					Statistics	SE	Statistics	SE
1. EI	1	5	3.51	1.05	-0.31	0.10	-0.62	0.21
2. ATB	1	5	3.71	0.83	-0.31	0.10	-0.44	0.21
3. SN	1	5	3.34	0.97	-0.09	0.10	-0.52	0.21
3. PBC	1	5	3.37	0.87	-0.03	0.10	-0.30	0.21
4. SAS	1	5	3.70	0.80	-0.51	0.11	0.54	0.21

Note: SE = standard error; ATB = Attitude Toward Behaviour; SN = Subjective Norms= PBC = Perceived Behavioural Control; EI = Entrepreneurial Intentions; SAS = Social and Societal Factors

Table 4.4 shows the results of reliability and validity for the combined data set. Kline (1996) recommended an alpha coefficient  $>0.70$  for a scale to be reliable. The reliability estimates ranged from 0.81 to 0.94 for both samples (2020 and 2021). The composite reliability ranged from .88 to .96, while the average variance extracted ranged between .64 and .88. These findings indicate that all scales demonstrated good-to-excellent reliability and validity (Reliability for both samples 2020 and 2021 are available in Appendix 10, Table 10.5),

When analysing categorical variables representing distinctive categories or groups (e.g., male-female), it becomes important to construct dummy variables (Field, 2013). These variables play a role in converting categorical categories into a numerical framework, thereby facilitating the examination of relationships and enabling predictive analysis among variables. The significance of this practice emerges from the reliance on correlation and regression-based analyses (e.g., mediation) on numerical values for exploring association

patterns. Given that categorical variables lack a numerical nature, direct integration into such analyses can be complicated. As such, each categorical group is translated into a numerical variable, particularly a binary variable, adopting values of 0 or 1. Within this encoding process, one specific category, in which the coding assigned a numerical value to each category, serves as the baseline point of reference in the regression analysis, while the remaining categories receive different coding, signifying their presence or absence in each observation.

Table 4.4. Results of Reliability and Validity (combined data set).

Variable	Item	Factor loadings	Cronbach's $\alpha$	Composite reliability	AVE
ATB	ATB 1	0.80	0.94	0.91	0.66
	ATB 2	0.85			
	ATB 3	0.79			
	ATB 4	0.89			
	ATB 5	0.73			
SN	SN 1	0.90	0.87	0.88	0.72
	SN 2	0.90			
	SN 3	0.73			
PBC	PBC 1	0.80	0.81	0.89	0.66
	PBC 2	0.82			
	PBC 3	0.84			
	PBC4	0.79			
EI	EI 1	0.94	0.83	0.96	0.88
	EI 2	0.96			
	EI 3	0.92			
SAS	SAS 1	0.82	0.82	0.90	0.64
	SAS 2	0.85			
	SAS 3	0.82			
	SAS 4	0.82			
	SAS 5	0.66			

ATB = Attitude Toward Behaviour; SN = Subjective Norms= PBC = Perceived Behavioural Control; EI = Entrepreneurial Intentions; SAS = Social and Societal Factors

Therefore, the importance of creating dummy variables arises, as this strategy effectively converts categorical variables into a numerical arrangement. Therefore, for the subsequent analysis such as correlation, regression, and mediation analyses, six dummy control variables were created with values of 0 and 1. In this category, 0 is considered as the reference category. These variables are related to the role of social and societal factors and the EI. For the gender variable, a value of 0 indicates a female participant, and 1 indicates a male participant. For the variable 'parents as a business owner', a value of 0 indicates that none of

the participant's parents was a business owner, and 1 indicates that one of the participant's parent was a business owner. For the region variable, the value of 0 indicates that the participant lived in the west of Saudi Arabia, and 1 indicates that the participant lived in central Saudi Arabia.

To test the relationship between the three income categories (low, middle, high) and the other research variables, the researcher created three income dummy variables. In the regression model, low income served as the reference category. The income 01 variable has a value of 1, which indicates a high household income, and a value of 0, which indicates a moderate or low income. For the income 02 variable, a value of 1 indicates a moderate household income, and 0 indicates a high or low income. For the income 03 variable, a value of 1 indicates a low household income, and 0 indicates a high or moderate income.

#### **4.4 Correlations Analysis**

The researcher conducted a Pearson correlation analysis to explore the correlations between the study variables in the 2020 and 2021 samples, as well as in the combined dataset. The results of these analyses are showcased in Table 4.5. Typically, the correlations among the key variables displayed statistical significance, and consistent patterns were observed across the 2020, 2021, and combined datasets.

The results of correlation analysis showed that EI had significant positive correlations with ATB, SN, PBC, and SAS. These findings are consistent with prior research on EI and its relationship with various constructs such as ATB, SN, PBC and SAS.

Also, the results demonstrated that ATB had significant positive correlations with SN, PBC, and SAS. These results are following earlier studies examining the associations between ATB and various factors, including SN, PBC, and SAS.

Furthermore, the findings of Pearson correlation indicated that SN was significantly positively correlated with PBC and SAS. Additionally, PBC was significantly positively correlated with SAS. These findings align with prior research that explored the relationships between SN and different variables such as PBC and SAS.

The interpretation of the emerging correlation findings is as follows. The findings related to the EI offer support for the notion that a more positive attitude toward entrepreneurial intention in the six months following graduation corresponds to a stronger intention to initiate a business, and vice versa. Additionally, individuals surrounded by positive and supportive figures regarding business startups exhibited higher levels of EI, and conversely, a lack of such support was associated with lower EI levels. Furthermore, a sense of personal capability to undertake a business venture was linked to an elevation in EI, and conversely, diminished perceived capability correlated with lower EI levels.

The three antecedents of the TPB also correlated with each other, providing evidence that the more positive the attitude towards starting up a business, the more support and positivity the participant had from family or friends regarding starting up a business, and vice versa. In addition, the more positive the participants' attitudes towards starting up a business, the more confident they were that they could start up a business, and vice versa. Moreover, the more support and positivity the participants had from family or friends regarding starting up a business, the more confident they were that they could start up a business, and vice versa.

Before this study, the academic literature did not feature an established scale specifically designed for measuring social and societal factors. As such, the development of such a scale especially tailored to explicitly measure this construct became imperative. In this regard, the SAS scale developed by the researcher of this study was useful in finding that SAS positively correlated with EI and the three antecedents of the TPB. In other words, it was evident that being positive about the rules and regulations, government support to entrepreneurs, the economy and political conditions, and the institution's financing support correlated positively with greater intention to start up a business, and vice versa. Moreover, being positive about these institutional factors is positively correlated with the attitude towards starting up a business, the positive feelings and support from families and parents regarding starting up a business, and the positive feeling about the capability of starting up a business, and vice versa. This finding would contribute to the literature on EI and the TPB model by encouraging other researchers to add the SAS variable to the TPB model and to test it in other contexts or different samples. The emerging findings reported here are in line with previous research. These findings not only advance the existing body of knowledge concerning EI and the TPB model but also extend an invitation to future researchers to integrate the SAS variable into the TPB framework and examine its applicability across diverse contexts and

participant groups, thereby enriching the scholarly evidence and empirical validation of this theoretical model.

In support of earlier research (e.g., Engle et al., 2011), in terms of gender, the results showed that gender was only significantly negatively correlated with SN. As the value of 0 in the dummy variable indicates a female participant, it can be understood that being female correlated with SN. In other words, people who are important to female participants in the Saudi context are supportive of her starting up a business. This is not unexpected, considering the prevalent social conservatism that characterizes the region. In such an environment, where traditional values and norms play a significant role, it is quite logical that those close to these female entrepreneurs would encourage their pursuit of business intentions and actions.

When it comes to the region, the findings revealed that the region was only negatively significantly correlated with PBC in 2020, which suggests that participants from the west of Saudi Arabia were more positive that they could start up a business than the participants from the central region of the country. A significant negative correlation was also found between the region and SAS, which suggests that the participants from the west were more positive about SAS than those from the central area. Based on these results, it can be understood that there is a possibility that participants from the West of Saudi Arabia received more support perhaps through training or entrepreneurship education. However, the qualitative data analysis in chapter six under the sub-theme (University entrepreneurial education and training) suggests the opposite. The participants from the west of Saudi Arabia complained that there is a lack of entrepreneurial education and training in their business schools. This is quite interesting to the researcher as the quantitative data findings (in 2020 at least) might contradict the qualitative data.

A dummy variable was generated for the income category, with dummy 01 indicating high household income, dummy 02 representing medium household income and dummy 03 referring to low household income as the reference category. - Low income had significant correlations with EI, ATB, SN, PBC, and SAS. This finding indicates that individuals from families with low-income levels tend to have a particular tendency with EI, ATB, SN, PBC, and SAS, suggesting potential relationships between their income status and their attitudes, subjective norms, perceived behavioural control, and social and societal factors related to

entrepreneurial intentions. This could imply that individuals with lower income backgrounds may demonstrate stronger levels of EI, ATB, SN, PBC, and SAS in comparison to their counterparts from higher-income families. However, it is important to note that the relationship between income status and EI, ATB, SN, PBC, and SAS is complex and can vary depending on various factors such as cultural, regional, and individual factors. While the finding suggests potential relationships, it is essential to conduct further research and analyse specific contexts to gain a deeper understanding of these dynamics. Despite this, the finding that individuals from low-income backgrounds tend to exhibit specific tendencies related to entrepreneurial intentions is consistent with the extant literature. For example, a study found that income level has a significant effect on entrepreneurial intention. In particular, the study revealed that individuals at both ends of the income spectrum—those with the lowest and highest income levels—displayed the strongest entrepreneurial inclinations (Ioane et al., 2020).

In other words, the participants from families who earned low household incomes had more positive attitudes toward starting up a business during the 6 months after graduation, and their families' thoughts about starting up a business were more positive. In addition, they were more confident that they could start up a business. Also, participants whose families earned low incomes were more positive about SAS than those whose families had incomes belonging to other income categories. Furthermore, the results suggest that the participants whose families had low household incomes expressed a stronger intention to start a business, one explanation is that Saudis are high in the power distance dimension proposed by Hofstede (2010). A high level of power distance could encourage individuals to engage in entrepreneurial activities to achieve high status in their society (Castillo-Palacio et al., 2017). This could encourage participants who are children of low-income parents to start a business. Also, according to the GEM report from 2018, 78% of Saudis believe that newly successful business owners are respected and held in high regard by their peers. This attitude could encourage the children of low-income families to be entrepreneurs and attain a higher status in their society. However, this correlation was found only during the COVID-19 restrictions (in the 2020 sample) and combined dataset. This could be related to the negative expectation that jobs would not be available because of the impact of COVID-19 on the economy, which led these participants to think about starting up their businesses.

For the data in 2020, the income dummy 01 variable correlated with the parents as business owner dummy variable. The participants from families with high household incomes were the children of parents who owned businesses. The income 01 variable correlated with the region dummy variable, which suggests that the participants from the central region of Saudi Arabia had higher household incomes than those from the West. Riyadh city located in the center of Saudi Arabia, and it is the capital of Saudi Arabia. The city has more business opportunities compared to Jeddah city located in the west, which could contribute to the higher income received by Riyadh citizens.

Table 4.5. Correlation analysis results for the 2020 sample, 2021 sample, and combined data set

2020 sample												
Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. EI	1	.76**	.60**	.67**	.30**	-0.1	0.1	0	-0.1	-0.08	.15**	
2. ATB		1	.60**	.68**	.28**	-0.1	0.05	-0.1	-.15*	-0.01	.18**	
3. SN			1	.61**	.39**	-.12*	-0.1	-0.1	-0.1	-0.04	.16**	
4. PBC				1	.47**	-0.1	0.1	-.13*	-0.1	-0.01	.14**	
5. SAS					1	0	0	-.12*	-0.1	-3	.14*	
6. Gender						1	0.02	0	0.04	0.07	-.11*	
7. Parents							1	0.08	.12*	-0.05	-0.07	
8. Region								1	.23**	-0.09	-.15*	
9. Income 1									1	-.50**	-.454**	
10. Income 2										1	-.53**	
11. Income 3											1	
2021 sample												
1. EI	1	.75**	.58**	.64**	.39**	-0	0.01	0.07	0.02	-0.03	0.03	
2. ATB		1	.59**	.62**	.42**	-0	-0	0.07	0.02	-0.1	0.08	
3. SN			1	.55**	.32**	0	-0	-0	-0	-0.09	0.12	
4. PBC				1	.42**	0.06	-0.1	0.1	0	-0.1	0.1	
5. SAS					1	0.11	0.03	0.11	-0.1	0.06	0.06	
6. Gender						1	0.12	0.03	-0.1	0.1	-0.02	



7. Parents	1	0.12	0.09	-0.05	-0.02
8. Region		1	0.07	-0.07	-0.01
9. Income 1			1	-.54**	-.43**
10. Income 2				1	-.51**
11. Income 3					1

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Combined data set

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1. EI	1	.75**	.60**	.66**	.33**	-0.1	0.07	0.03	-0	-0.06	.01*	-.13**
2. ATB		1	.60**	.66**	.33**	-0.1	0.03	0.01	-0.1	-0.05	.14**	-.14**
3. SN			1	.59**	.36**	-.09*	0	-0.1	-0.1	-0.07	.15**	-.16**
4. PBC				1	.45**	0	0.04	0	-0.1	-0.06	.13**	-.09*
5. SAS					1	0.02	0	0	-.11*	0.01	.11*	-0.01
6. Gender						1	0.05	0	-0	.09*	-0.08	.14**
7. Parents							1	.01*	.10*	-0.06	-0.04	-0.07
8. Region								1	.16**	-0.08	-0.08	-.09*
9. Income 1									1	-.52**	-.44**	0.01
10. Income2										1	-.52**	0.02
11. Income3											1	-0.04
12. 20/21												1

Note: \*\*  $p < 0.01$ , \*  $p < 0.05$

#### 4.5 Regression Analysis

To further investigate the relationships between EI and the TPB antecedents (ATB, SN, and PBC), a two-step multiple regression analysis was undertaken to identify which independent variables are associated with variance in EI in both samples (2020 and 2021). Before performing the regression model, the researcher first tested the assumption of multicollinearity, which is important to establish when a high correlation exists between independent variables (ATB, SN, and PBC). The researcher used the variance inflation factors (VIFs) and tolerance factors to provide evidence of multicollinearity. The results showed that the VIFs were  $\leq 2.09$  and that tolerance was  $\geq 0.47$  in both samples (see Table 4.6). As such, these two statistics did not violate the threshold values for the VIFs of at least 5 and the tolerance values of  $< 0.2$ , which are utilised to suggest multicollinearity between independent variables (Kutner *et al.*, 2004).

Table 4.6. Results of the collinearity statistical analysis for the 2020 2021 samples.

Tolerance			VIF		
2020	2021	Combined	2020	2021	Combined
0.487	0.527	0.498	2.053	1.897	2.010
0.568	0.598	0.572	1.762	1.672	1.749
0.477	0.556	0.508	2.096	1.799	1.967

In the regression models, gender, parent as business owner, region, ATB, SN, and PBC were included as independent variables, while EI was considered as a dependent variable. The researcher controlled for gender, parents as business owners, and region for any possible confounding effects and added these three variables in step 1. The researcher included the TPB variables (i.e. ATB, SN, and PBC) in step 2. The results are reported in Table 4.7. In the initial step of the regression model, the variables entered in Step 1 did not yield significant outcomes for 2020 [ $F_{(1,3)} = 1.15$ ,  $R = 0.11$ ;  $R^2 = 0.01$ ;  $p > 0.05$ ], 2021 [ $F_{(1,3)} = 0.40$ ,  $R = .07$ ;  $R^2 = .00$ ;  $p > .05$ ] and the combined dataset. Specifically, the variables of gender ( $\beta = -0.04$ ,  $p > 0.05$  (2020);  $\beta = -0.01$ ,  $p > 0.05$  (2021);  $\beta = -0.04$ ,  $p > 0.05$  (combined)), parental business ownership ( $\beta = 0.10$ ,  $p > 0.05$  (2020);  $\beta = 0.00$ ,  $p > 0.05$  (2021);  $\beta = 0.06$ ,  $p > 0.05$  (combined)), and region ( $\beta = -0.30$ ,  $p > 0.05$  (2020);  $\beta = 0.07$ ,  $p > 0.05$  (2021);  $\beta = 0.02$ ,  $p > 0.05$  (combined)) did not indicate statistically significant associations with predicting EI.

Entering the TPB variables in Step 2 caused a statistically significant change in the  $R^2$  value in predicting EI for the data obtained in 2020 [ $F(3, 65) = 173.67, R = .80; R^2 = .64; \Delta R^2 = .64; p < .001$ ], 2021 [ $F(3, 54) = 122.33, R = .79; R^2 = .62; \Delta R^2 = .62; p < .001$ ]. ATB ( $\beta = 0.50, p < .001$ ), and the combined dataset. In particular, the variables of ATB ( $\beta = 0.51, p < 0.01$  (2020);  $\beta = 0.50, p < 0.01$  (2021);  $\beta = 0.51, p < 0.01$  (combined), SN ( $\beta = 0.15, p < 0.01$  (2020);  $\beta = 0.15, p < 0.01$  (2021);  $\beta = 0.15, p < 0.01$  (combined), and PBC ( $\beta = 0.24, p < 0.01$  (2020);  $\beta = 0.25, p < 0.01$  (2021);  $\beta = 0.24, p < 0.01$  (combined) indicated statistically significant associations with predicting EI.

Table 4.7. Regression analysis with EI as a dependent variable for the 2020, 2021, and combined samples

Variable	2020 sample					2021 sample					Combined data set				
	<i>B</i>	SE	$\beta$	<i>t</i>	<i>p</i>	<i>B</i>	SE	$\beta$	<i>T</i>	<i>p</i>	<i>B</i>	SE	$\beta$	<i>t</i>	<i>p</i>
<i>Step 1</i>															
Gender	-0.09	0.12	-0.04	-0.79	0.43	-0.25	0.15	-0.01	-0.17	0.87	-0.09	0.09	-0.04	-1.02	0.30
Parents as business owner	0.23	0.13	0.10	1.70	0.09	0.01	0.17	0.00	0.08	0.94	0.15	0.10	0.06	1.45	0.14
Region	-0.06	0.13	-0.30	-0.49	0.62	0.17	0.16	0.07	1.07	0.28	0.05	0.10	0.02	0.52	0.59
<i>Step 2</i>															
ATB	0.63	0.06	0.51	10.13	0.00	0.65	0.07	0.50	8.90	0.00	0.65	0.05	0.51	13.60	0.00
SN	0.16	0.05	0.15	3.27	0.00	0.17	0.06	0.15	3.37	0.00	0.16	0.04	0.15	4.30	0.00
PBC	0.28	0.06	0.24	4.70	0.00	0.31	0.07	0.25	4.57	0.00	0.29	0.04	0.24	6.50	0.00
Note: SE = standard error <i>B</i> = coefficient represents the estimated effect $\beta$ = standardized coefficients															

Table 4.8. Hypothesis results

Hypothesis	2020	2021	Combined
H1: An entrepreneurially favourable ATB is positively related to EI.	✓	✓	✓
H2: An entrepreneurially favourable SN is positively related to EI.	✓	✓	✓
H3: PBC is positively related to EI.	✓	✓	✓
H4: A positive relationship exists between ATB and SN.	✓	✓	✓
H5: A positive relationship exists between ATB and PBC.	✓	✓	✓
H6: A positive relationship exists between SN and PBC.	✓	✓	✓
H7: ATB, SN, and PBC are positively associated with EI.	✓	✓	✓
H8: A positive relationship exists between SAS and EI.	✓	✓	✓
H9: A positive relationship exists between SAS and ATB.	✓	✓	✓
H10: A positive relationship exists between SAS and SN.	✓	✓	✓
H11: A positive relationship exists between SAS and PBC.	✓	✓	✓
H16: A relationship exists between gender and EI.	✗	✗	✗
H17: A relationship exists between region and EI.	✗	✗	✗
H18: A relationship exists between parents as business owners and EI.	✗	✗	✗
H19: Gender, region, and parents as business owners are associated with EI.	✗	✗	✗
H20: A positive relationship exists between parents who receive high income and their children's EI.	✗	✗	✗

Table 4.8 shows that the H1 hypothesis suggests that individuals who hold positive attitudes toward entrepreneurial behaviour are likely to have higher levels of entrepreneurial intentions. In other words, those who believe that engaging in entrepreneurial activities will result in positive outcomes and benefits are more likely to attempt entrepreneurship. This hypothesis is consistent with the theory of planned behavior (TPB), which posits that attitudes toward a behaviour influence an individual's intention to engage in that behaviour. In the entrepreneurial context, favorable attitudes toward entrepreneurial activities, such as viewing entrepreneurship as an opportunity for personal growth, financial success, or social impact, may influence an individual's intention to engage in entrepreneurial activities, which is expected to increase the likelihood of entrepreneurship.

The H2 hypothesis refers to the relationship between supportive social networks (SN) and entrepreneurial intentions (EI). Research has often shown that having a supportive social network can have a positive impact on entrepreneurial aspirations. When you are surrounded by people who encourage you to start a business and provide resources, advice, and role models, you are more likely to gain the motivation, confidence, and resources needed to pursue your career. This collaborative environment fosters a mindset that helps you identify and seize business opportunities. Therefore, a favorable social network can be seen as promoting entrepreneurial aspirations.

The H3 hypothesis suggests that there is a positive relationship between perceived behavioural control (PBC) and entrepreneurial intentions (EI). PBC refers to an individual's perception of their ability to perform a specific behaviour, taking into account internal and external factors that may promote or hinder that behaviour. In the entrepreneurial context, PBC encompasses an individual's belief in their ability to start and successfully manage a business, taking into account factors such as skills, knowledge, resources, and environmental conditions. Research generally supports the view that higher perceived behavioural control is positively associated with entrepreneurial intentions. When individuals are confident in their ability to overcome entrepreneurial challenges and believe that they have the skills and resources required to start and sustain a business, they are more likely to intend to engage in business activities, which will be costly. This belief in control over one's entrepreneurial behaviour can enable individuals to overcome obstacles and take proactive steps to achieve their entrepreneurial goals. Therefore, a positive relationship between perceived behavioural

control and entrepreneurial intentions is commonly observed in the entrepreneurial psychology literature.

Hypothesis H4 suggests that in the entrepreneurial context, there is a positive relationship between attitude toward behaviour (ATB) and social norms (SN). ATB refers to an individual's evaluation of performing a specific behaviour (in this case, engaging in entrepreneurial activities). Social network, on the other hand, refers to the interpersonal relationships and connections that an individual has. This includes friends, family, colleagues, mentors, and other entrepreneurs. In other words, the positive relationship between ATB and SN suggests that individuals who have a more positive attitude toward entrepreneurship are more likely to have a supportive social network.

According to H5, there is a positive relationship between attitude toward behaviour (ATB) and perceived behavioural control (PBC) in the entrepreneurial context. ATB refers to an individual's evaluation of how much he or she desires or likes to engage in a particular behaviour (e.g., participating in entrepreneurial activities). On the other hand, PBC involves an individual's perception of his or her ability to perform the behaviour, taking into account both internal and external factors. The positive correlation between attitude toward behaviour and perceived behavioural control suggests that individuals' beliefs and perceptions play an important role in shaping their confidence and ability to pursue entrepreneurial activities. This adjustment of attitudes and perspectives contributes to the development of entrepreneurial intentions and actions.

H6 suggests that there is a positive relationship between social norms (SN) and perceived behavioral control (PBC). The positive relationship between social networks and perceived behavioral control suggests that the structure and dynamics of an individual's social connections are important in shaping their confidence and perceived ability to engage in entrepreneurial activities, suggesting that it plays a role. Access to resources, social learning opportunities, network support, and social recognition within the network contribute to entrepreneurs' sense of control over their behaviour.

H7 proposes that attitude toward behaviour (ATB), social norms (SN), and perceived behavioural control (PBC) are positively related to entrepreneurial intention (EI). This

hypothesis reflects the view that these factors play an important role in shaping an individual's intention to engage in entrepreneurial activities.

H8 hypothesizes that there is a positive relationship between social factors (SAS) and entrepreneurial intention (EI). Social and societal factors include a wide range of influences from the external environment that can shape an individual's intention to engage in entrepreneurship.

H9 suggests that the social and societal context in which individuals are located influences their attitudes toward entrepreneurship. The positive correlation between social and social factors and behavioural attitudes indicates the importance of external influences in shaping individuals' beliefs and perceptions of the desirability and feasibility of entrepreneurial activities.

H10 proposes that the social and societal context in which individuals are located influences the formation, structure, and dynamics of their social networks. The positive correlation between social factors and social networks indicates the relationship between broader social influences and social behaviours and relationships at the individual level.

H11 suggests that the social and societal context in which individuals are located influences individuals' perceived control over their behaviors, including engaging in entrepreneurial activities. The positive correlation between social factors and perceived behavioral control indicates that external influences may play a role in shaping individuals' beliefs and perceptions of their ability to pursue business activities, indicating that it is important.

#### **4.6 Mediation Analysis**

Before starting the mediation analysis, a simple linear regression was performed to determine if SAS as an independent variable would significantly influence EI as a dependent variable. (The results are provided in the appendix). The regression analysis results suggest that SAS ( $\beta = 0.29, p < 0.001, (2020), \beta = 0.39, p < 0.001 (2021)$ ) showed statistical significance in predicting EI [ $F_{(1,25)} = 25.97, R = 0.29; R^2 = 0.09; p < 0.001 (2020), F_{(1,38)} = 38.50, R = 0.39; R^2 = 0.15; p < 0.001 (2021)$ ]. On this basis, the researcher decided to perform a mediation



analysis, and test the following three hypothesis to statistically test the mediation relationship between the main variables.

H13: ATB mediates the relationship between SAS and EI.

H14: SN mediates the relationship between SAS and EI.

H15: PBC mediates the relationship between SAS and EI.

Baron and Kenny (1986) introduced the traditional causal step approach to mediation, which involves three regression equations to test the mediation relationship. Firstly, in the initial regression, the independent variable must show a significant association with the dependent variable. This step establishes the direct effect of the independent variable on the dependent variable. Secondly, in the subsequent regression, the independent variable must demonstrate a significant association with the mediator. This step establishes the direct effect of the independent variable on the mediator. Thirdly, in the final regression, both the independent variable and the mediator are included as predictors. Here, the mediator must exhibit a significant association with the dependent variable, controlling for the independent variable. This step determines whether the mediator mediates the relationship between the independent and dependent variables. The Baron and Kenny mediation process provides a systematic way to understand the underlying mechanisms of an effect. It helps researchers to assess whether a variable (the mediator) intervenes in the relationship between the independent and dependent variables. This approach is preferred because it offers a clear and structured method for testing mediation, allowing researchers to identify whether the mediator plays a significant role in the relationship. Additionally, it provides evidence about the mediation (complete or partial) by examining how the direct effect of the independent variable on the dependent variable changes after controlling for the mediator. The mediation relationship can be complete when the independent variable has no significant association with the dependent variable after controlling for the mediator. It is partial when the association between the independent and dependent variables is diminished after controlling for the mediator. By following this approach, researchers can gain a deeper understanding of the causal mechanisms underlying their hypotheses. Furthermore, it allows for the comparison of mediation effects across different studies, enhancing the reproducibility and generalisability of findings in the field.

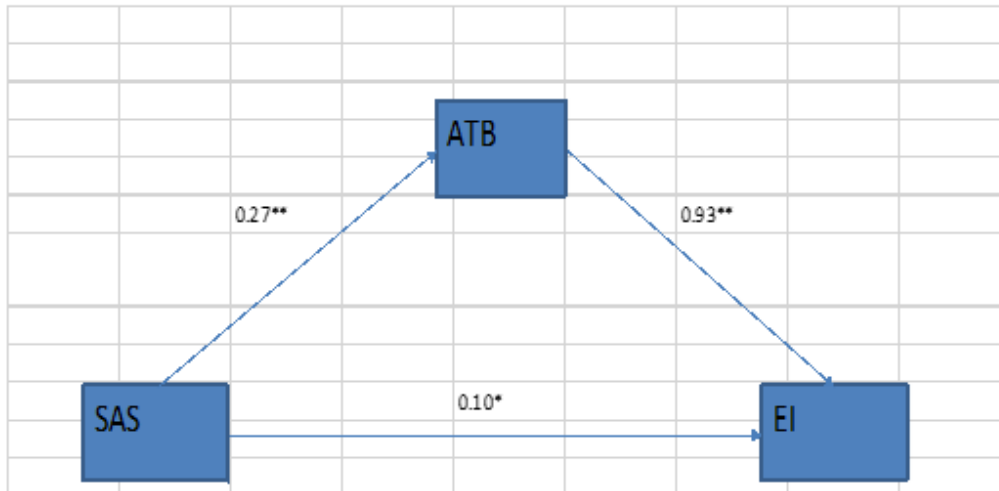
Hayes (2018) created the PROCESS macro as a tool to test the mediation relationship. Compared with the traditional causal steps, the PROCESS macro is a single statistical step

that tests the indirect effect of the independent variable on the dependent variable through a mediator. In other words, the PROSESS macro combines the three steps of the traditional causal steps in one statistical step. Another advantage of the PROCESS macro is that it employs bias-corrected bootstrap confidence intervals (CIs) through a single statistical step (Hayes, 2018). In addition, the PROCESS macro can be installed in the SPSS software, which was used by the researcher. As the PROCESS macro has advantages over the traditional causal steps, the researcher decided to use the PROCESS macro with model 4 to test the mediating effects of ATB, SN, and PBC in the relationships between SAS and EI. The statistical significance of the mediating variable was examined using 10,000 bootstrap samples. This method created 95% CIs of the indirect effects. The model is considered statistically significant if the bootstrapped 95% CIs do not include zero (Hayes, 2018).

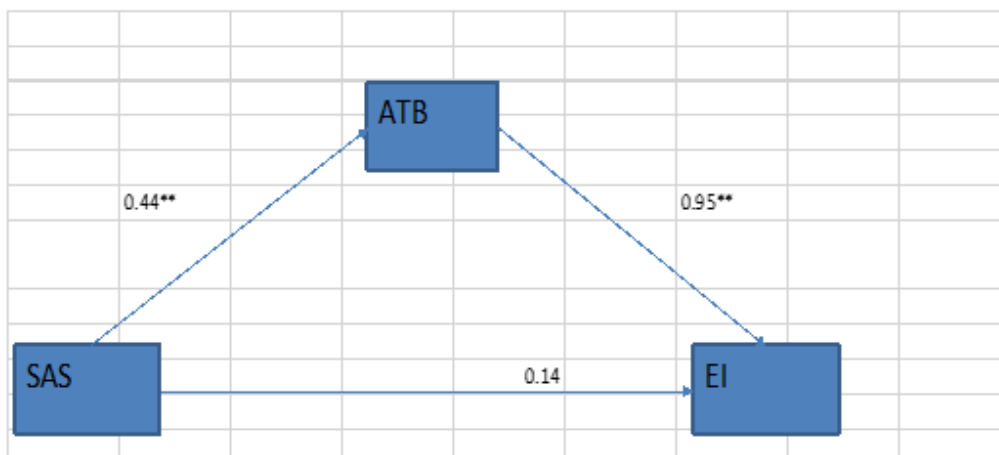
In the tested models, SAS was considered as a predictive variable, while EI was treated as an outcome variable. Moreover, ATB, SN, and PBC were treated as mediators. The bootstrap approach, which is a resampling technique utilised to calculate statistics on a population by sampling a dataset with a replacement, was used to test the significance of the mediation model. To that end, three separate mediation models were performed using the two study samples (2020 and 2021).

In the first mediation model, the researcher tested the mediating effect of ATB in the relationship between SAS and EI in both samples. The results indicated that SAS ( $\beta = 0.27, p < 0.01$  (2020);  $\beta = 0.44, p < 0.01$  (2021)) was a significant predictor of ATB. Also, SAS statistically significantly predicted EI in 2020 ( $\beta = 0.10, p < 0.05$  (2020)), but not in 2021 ( $\beta = 0.14, p > 0.05$  (2021)). Furthermore, ATB ( $\beta = 0.93, p < 0.01$  (2020);  $\beta = 0.95, p < 0.01$  (2021)) significantly predicted the EI (see Figure 4.1). Collectively, these two independent variables (SAS and ATB) accounted for 58% of the variance in EI in 2020 and 56% in 2021. The results of the bootstrapping analysis demonstrated that the indirect effect of SAS on EI through ATB was statistically significant for both the 2020 data (effect = 0.25, 95% CI [0.14–0.36]) and the 2021 data (effect = 0.42, 95% CI [0.26–0.57]). Additionally, the indirect effect of SAS on EI in the presence of the mediator (ATB) was found to be significant. This suggests that ATB plays a partial mediating role in the relationship between SAS and EI. The information regarding the total and indirect effects, along with their corresponding 95% bias-corrected confidence intervals, can be found in Table 4.9.

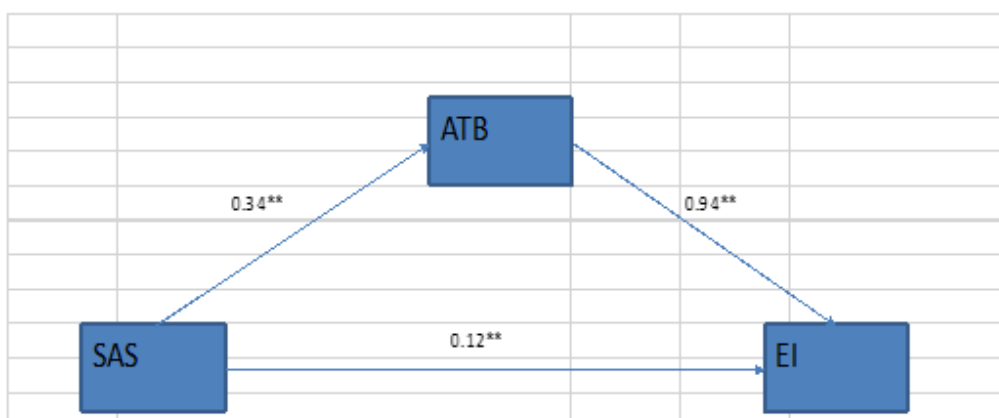
Figure 4.1. The mediating role of ATB in the relationship between SAS and EI.  
Data for 2020



Data for 2021

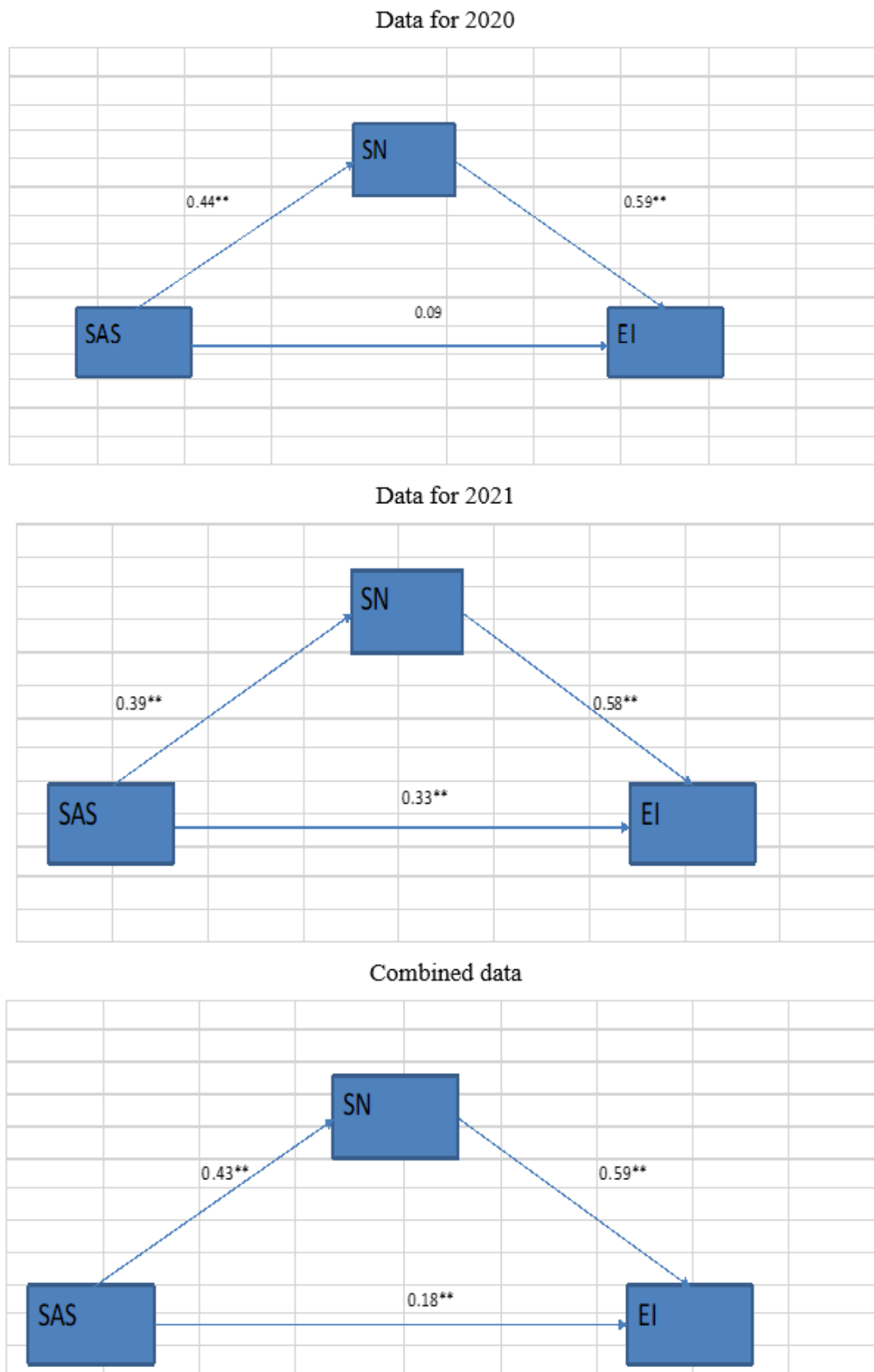


Combined data



In the second mediation model, the researcher tested the hypothesis that SN would mediate the relationship between SAS and EI in both samples. The findings revealed a significant predictive relationship between SAS and SN ( $\beta = 0.44, p < 0.01$  (2020);  $\beta = 0.39, p < 0.01$  (2021)). SAS accounted for 14% of the variance in SN for the 2020 data and 10% for the 2021 data. Also, SAS statistically significantly predicted EI in 2021 ( $\beta = 0.33, p < 0.05$ , (2021)), but not in 2020 ( $\beta = 0.09, p > 0.05$ , (2020)). Furthermore, SN ( $\beta = 0.58, p < 0.01$ , (2020);  $\beta = 0.58, p < 0.01$ , (2021)) significantly predicted the EI (see Figure 4.2). To ascertain the presence of a mediating effect among the variables of interest, bootstrapping analysis yielded significant results. Specifically, the indirect effect of SAS on EI through SN was found to be significant in both 2020 data (effect = 0.26, 95% CI [0.17–0.35]) and 2021 data (effect = 0.22, 95% CI [0.12–0.35]). Thus, it can be concluded that SN serves as a mediator in the relationship between SAS and EI for both the 2020 and 2021 datasets. The total and indirect effects, along with their corresponding 95% bias-corrected confidence intervals, are presented in Table 4.9.

Figure 4.2. The mediating role of SN in the relationship between SAS and EI



In the final mediation model, the researcher tested the hypothesis that PBC would mediate the relationship between SAS and EI in both samples. The findings revealed a significant

predictive relationship between SAS and PBC ( $\beta = 0.49, p < 0.01, (2020)$ ;  $\beta = 0.47, p < 0.01, (2021)$ ). SAS accounted for 22% of the variance in PBC for the 2020 data and 17% for the 2021 data. Also, SAS statistically significantly predicted EI in 2021 ( $\beta = 0.20, p < 0.05, (2021)$ ), but not in 2020 ( $\beta = -0.03, p > 0.05, (2020)$ ). Furthermore, PBC ( $\beta = 0.80, p < 0.01, (2020)$ ;  $\beta = 0.75, p < 0.01, (2021)$ ) significantly predicted the EI (see Figure 4.3). To examine the presence of a mediating effect among the variables of interest, bootstrapping analysis yielded significant results. In particular, the indirect effect of SAS on EI through PBC was found to be significant in both 2020 data (effect = 0.39, 95% CI [0.29–0.50]) and 2021 data (effect = 0.35, 95% CI [0.23–0.50]). Therefore, it can be concluded that PBC acts as a mediator in the relationship between SAS and EI for both the 2020 and 2021 datasets. The total and indirect effects, along with their corresponding 95% bias-corrected confidence intervals, are presented in Table 4.9.

Figure 4.3. The mediating role of PBC in the relationship between SAS and EI.

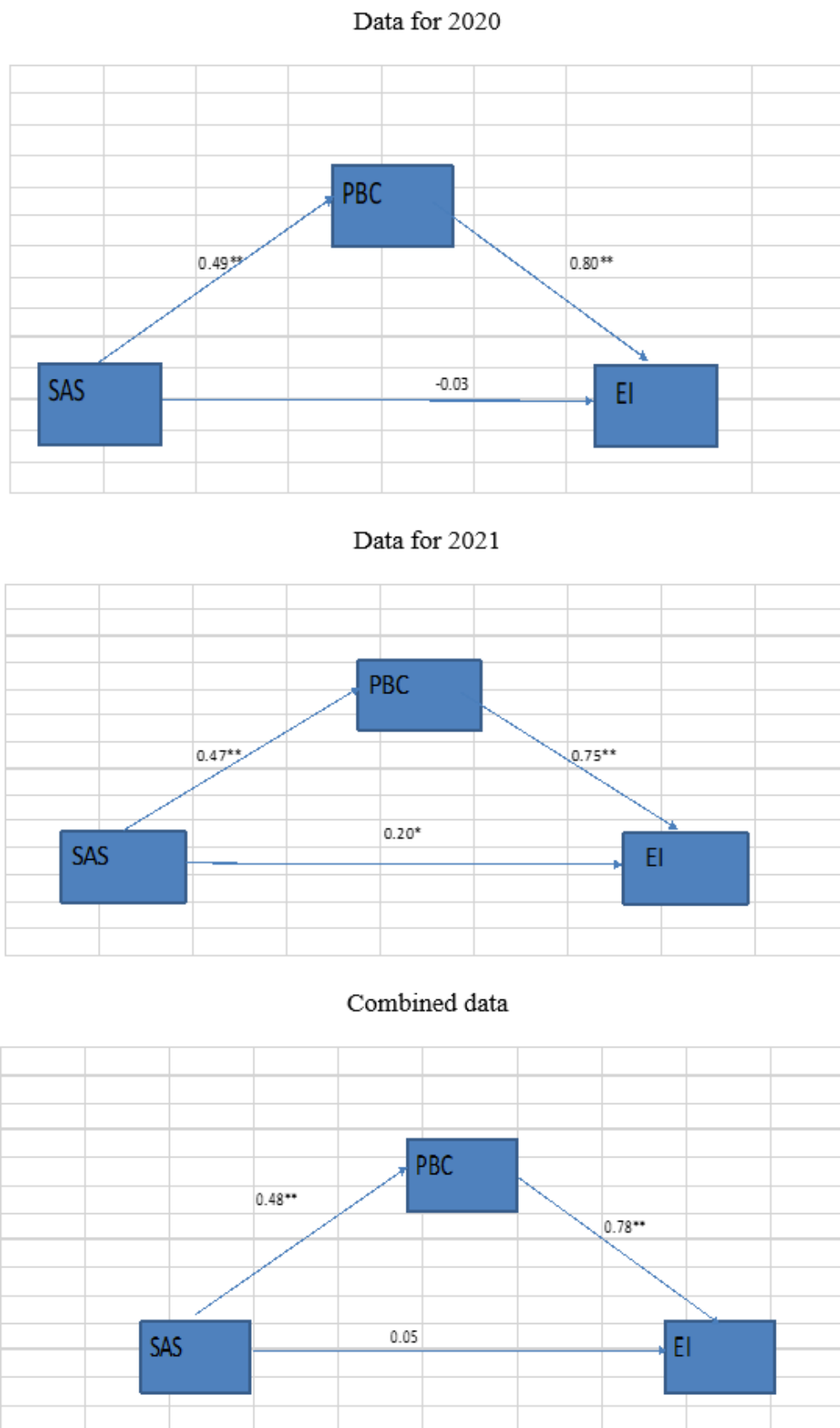


Table 4.9. Total, direct, and indirect effects of the mediation analysis.

Relationship		Effect			Confidence interval		t statistics	Mediation
		Total	Direct	Indirect	Lower bound	Upper bound		
SAS -> ATB	2020	0.35 (0.00)	0.10 (0.03)	0.25	0.14	0.36	2.13	Partial
-> EI	2021	0.55 (0.00)	0.14 (0.05)	0.42	0.26	0.57	1.94	Full
	SAS -> SN -> EI (2020)	0.35 (0.00)	0.19 (0.14)	0.26	0.17	0.35	1.46	Full
	SAS -> SN -> EI (2021)	0.55 (0.00)	0.33 (0.00)	0.22	0.12	0.35	4.01	Partial
	SAS -> PBC -> EI (2020)	0.35 (0.00)	-0.03 (0.51)	0.39	0.29	0.5	-0.64	Full
	SAS -> PBC -> EI (2021)	0.55 (0.00)	0.20 (0.01)	0.36	0.23	0.5	2.46	Partial
	SAS -> ATB -> EI (combined)	0.44 (0.00)	0.12 (0.00)	0.32	0.23	0.41	2.88	Partial
	SAS -> SN -> EI (combined)	0.44 (0.00)	0.18 (0.00)	0.26	0.18	0.32	3.62	Partial
	SAS -> PBC -> EI (combined)	0.44 (0.00)	0.05 (0.29)	0.39	0.30	0.47	2.88	Full

Note. Number of bootstrap samples for percentile bootstrap confidence intervals: 10,000.



The results of the mediation analysis supported H13, H14, and H15, and these findings suggest that being positive about the rules and regulations, government support to entrepreneurs, economic conditions, political conditions, and institutions' financial support influenced the positive attitude towards starting up a business. Then, the positive attitude towards starting up a business influenced the intention to start up a business. In addition, being positive about these institutional factors influenced the positive feelings and support from families and parents regarding starting up a business. Then, the family's thoughts and support influenced the level of intention to start up a business. Moreover, being positive about these institutional factors influenced the positive feeling regarding being able to start up a business, which then influenced the intention to start up a business. These findings provide contributions to policy making and recommendations to the governments of developing countries to improve these institutional factors to increase the level of EI among their young populations.

## **Chapter Five: Findings from the Longitudinal Approach (EI and EA Findings)**

### **5.1 Introduction**

This chapter focuses on the findings of the research question: Do university students transform their EI into EA after they finish their studies? It presents the longitudinal approach applied in this thesis, which are the results of the follow-up of the participants 6 months after graduating. Also, this chapter elucidates how EI evolved during the COVID-19 restrictions and post-restriction period. Slight differences were observed between the means of the ATB, SN, PBC, and EI scores in the 2020, 2021, and combined data sets. Unexpectedly, these differences indicate that the level of intention to start up a business decreased slightly after the COVID-19 restrictions were removed. A dummy variable for the 2020 and 2021 samples was added to the data analysis to obtain statistical evidence that EI, ATB, SN, and SAS changed after the COVID-19 restrictions were removed. A value of 0 represents the 2020 sample, and a value of 1 represents the 2021 sample. A regression analysis and *t*-test were performed using the dummy variable of the 2020 and 2021 samples to find any change in intention level during and after the COVID-19 restrictions.

These findings provide evidence of the potential impact of external factors, such as the pandemic, on entrepreneurial intention. While it might be expected that the removal of restrictions would lead to a surge in entrepreneurial motivation, the reality appears to be more complex. It raises questions about how the uncertainty and challenges brought about by the pandemic influenced the entrepreneurial mindset of recent graduates. Perhaps the experience of living through a crisis made some individuals more cautious, while others may have become more determined to pursue their entrepreneurial goals. This suggests that the relationship between external events, such as the pandemic, and entrepreneurial intention is multifaceted. It underscores the importance of considering the broader context when studying entrepreneurship and how external factors can shape the intentions, attitudes, and motivations of entrepreneurs. Further research in this area could provide important evidence about the dynamics of entrepreneurial intention and the role of external events in influencing it.

### **5.2 Short Survey Analysis**

To investigate the EI and EA gap among recent graduates, the researcher first identified graduates who intended to start up a business before graduating from university. The research

question 2 explores whether Saudi university students convert their EI into EA after graduation, considering the influence TPB model and its antecedents including SAS on this process. The researcher was interested in determining the number of graduates who did not take steps or actions to start up a business during the 6 months after graduating from university. The researcher contacted participants in both samples (2020 and 2021) who had agreed to participate in the short follow-up surveys. In the 2020 sample, of the 135 participants who agreed to participate in the short survey after 6 months, 82 participated (60%). Similarly, in the 2021 sample, of the 76 participants who agreed to participate in the short survey after 6 months, 42 (55%) participated. These findings show a relatively high level of commitment and interest among participants, given that follow-up surveys can sometimes experience substantial drop-off rates. The willingness of participants to remain engaged over time demonstrates their dedication to the study and their recognition of its importance. This level of sustained involvement refers to the quality and reliability of the longitudinal data collected and supports the validity of the findings of this study.

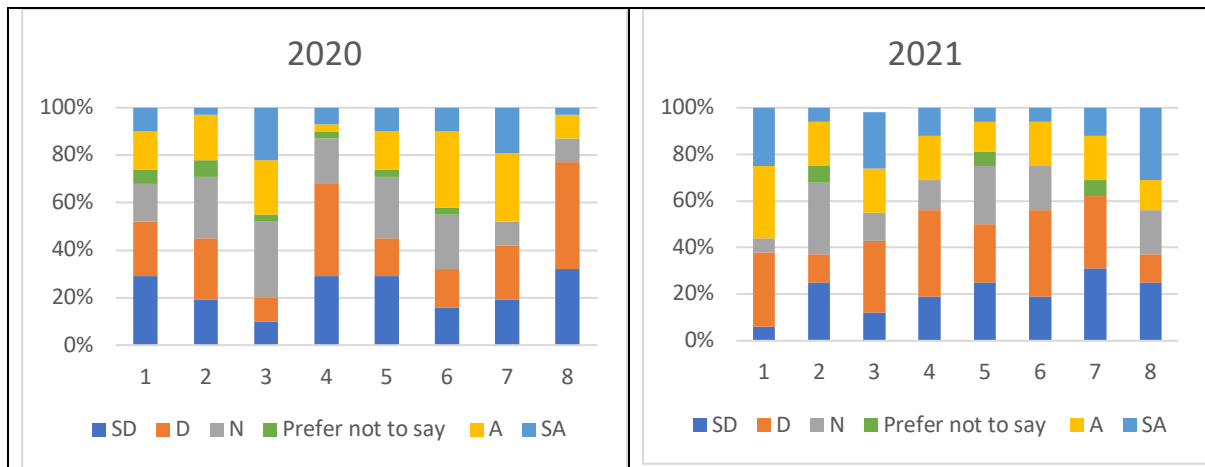
In the 2020 sample, of the 82 participants in the 2020 sample who participated in the second wave of data collection, 55 (67%) did not take any EA during the 6 months after graduation. Forty-six (83%) of the 55 participants had intended to start a business. Similarly, of the 42 participants in the 2021 sample who participated in the second wave of data collection, 32 (76%) did not take any EA during the 6 months after graduation. Twenty-five (78%) of the 32 participants had intended to start a business. These high percentages (83% and 78%) provide evidence that the EI and EA gap existed among university students who just finished their studies. These findings suggest the existence of a significant gap between entrepreneurial intention and action in the context of recent university graduates in Saudi Arabia. It is apparent that a substantial portion of these graduates, despite fostering entrepreneurial intentions during their academic years, did not take the necessary steps to initiate their businesses after completing their studies. However, the survey data alone do not provide evidence concerning the specific factors influencing this gap between entrepreneurial intention and action. The reasons behind the inaction of some business graduates, despite having expressed entrepreneurial intentions, and the motivating factors that led others to embark on entrepreneurial activities remain unrevealed. To better understand these dynamics, further research through interviews with select participants in this study was conducted. This qualitative phase aimed to shed light on the relationships among social, cultural, economic, and individual factors that contribute to the observed EI and EA gap.

Of the original survey respondents who then participated in the short follow-up survey, 45 of the 82 participants in the 2020 sample and 25 of the 42 participants in the 2021 sample completed all the survey questions. The participants who had not taken any steps during the 6 months after graduating were kindly asked to answer further questions (31 participants in the 2020 sample and 25 participants in the 2021 sample) as presented in the Table below. Even though the number of participants was smaller than planned, making it difficult to generalise the results, or conclude, the participants' answers provided useful insights to the researcher about the potential reasons that prevented the recent graduates from taking EA. The graduates' answers are presented in Figure 5.1 for the 2020 sample and Figure 5.2 for the 2021 sample.

- 
- 1 The lack of financial support from my family has prevented me from taking steps to start up my business in the past six months.
  - 2 The lack of financial support from the financial institutions has prevented me from taking steps to start up my business in the past six months.
  - 3 The lack of social connections and networking has prevented me from taking steps to start up my business in the past six months.
  - 4 The current rules and regulations regarding starting up a business have prevented me from taking steps to start up a business in the past six months.
  - 5 The current state of the Saudi economy led me to delay taking steps to start up a business in the past six months.
  - 6 The coronavirus (COVID-19) situation has prevented me from taking steps to start up a business in the past six months.
  - 7 I have not taken steps to start up a business in the past six months because I was hired as an employee.
  - 8 I have not taken steps to start up a business in the past six months because I decided to pursue my education and get a higher degree.
-

Figure 5.1: The short survey answers

Figure 5.2: The short survey answers



The participants who had taken EA in the six months since graduating were asked to indicate which EA they had taken (14 participants in the 2020 sample and 9 participants in the 2021 sample). The Table above presents the survey questions and summarizes the reasons why participants have not taken steps to start their businesses in the past six months. These reasons include factors like a lack of financial support from both family and financial institutions, limited social connections and networking opportunities, the impact of existing business regulations, economic conditions in Saudi Arabia, the influence of the COVID-19 pandemic, opting for employment, and pursuing higher education as alternatives to entrepreneurship during this period. The most frequent options chosen by the students in the 2020 and 2021 samples were developing a business plan and developing a product or service. It is important to recognise, this is a small number of participants.

The findings presented in the table above present important evidence concerning the factors that hindered recent university graduates in Saudi Arabia from translating their entrepreneurial intentions into actions during the six months following graduation. These findings not only illuminate the challenges faced by young entrepreneurs but also provide important considerations for policymakers, educational institutions, and support organizations seeking to foster a more conducive environment for entrepreneurship.

One important consideration is the prominence of financial constraints as a significant barrier to entrepreneurial action. Participants reported a lack of financial support from both family members and financial institutions as a key impediment. This suggests the need for improved

access to financing options tailored to the unique circumstances and needs of young entrepreneurs. Policymakers and financial institutions should explore innovative financing mechanisms and support programs aimed at reducing the financial burden on business owners and new entrepreneurs.

Another critical aspect highlighted by the findings is the role of social networks and connections in entrepreneurship. Limited social connections and networking opportunities were also reported as obstacles. This suggests that initiatives aimed at fostering entrepreneurial ecosystems should emphasize the importance of building robust networks and providing platforms for young entrepreneurs to connect with mentors, peers, and potential collaborators.

Furthermore, the influence of existing business regulations and economic conditions in Saudi Arabia cannot be overlooked. Participants noted the impact of business regulations on their decision-making process, indicating the need for entrepreneur-friendly regulatory frameworks. Additionally, the economic conditions, compounded by the effects of the COVID-19 pandemic, influenced participants' choices. Policymakers should consider strategies to enhance economic stability and resilience, especially in times of crisis, to encourage entrepreneurship.

Interestingly, a substantial number of participants in both samples expressed a preference for employment or pursuing higher education as alternatives to entrepreneurship during the specified period. This suggests that there is a need for programs and initiatives that highlight the value and potential rewards of entrepreneurship as a viable career path.

However, it is essential to acknowledge that the number of participants who provided this evidence is relatively small, and these findings should be interpreted cautiously. To gain a better understanding of the factors influencing the EI and EA gap, future research could benefit from larger and more diverse samples.

The findings presented here offer valuable guidance for stakeholders interested in promoting entrepreneurship among recent university graduates in Saudi Arabia. Addressing financial barriers, enhancing networking opportunities, improving regulatory frameworks, and highlighting the benefits of entrepreneurship are key steps toward bridging the gap between

intention and action in the entrepreneurial journey of young graduates. Further research and policy initiatives can build upon this evidence to create a more supportive environment for budding entrepreneurs in the region.

### 5.3 EI during and after the COVID-19 Restrictions

One motivation for collecting data again in 2021 was to determine whether the level of EI and EA would change after the lifting of COVID-19 restrictions. The researcher hypothesised that following the lifting of COVID-19 restrictions and uncertainties (2021), the students' EI would be higher than when the restrictions were in place.

Table 5.1. Independent sample test results of the dummy, EI, ATB, SN, PBC, and SAS variables for both the 2020 and 2021 samples.

Groups	Year	Mean	SD	t	p
EI	2020	3.63	1.02	2.980	0.003
	2021	3.36	1.07	2.961	0.003
ATB	2020	3.82	0.83	3.211	0.001
	2021	3.59	0.82	3.214	0.001
SN	2020	3.48	0.98	3.807	<.001
	2021	3.16	0.93	3.834	<.001
PBC	2020	3.44	0.88	2.029	0.043
	2021	3.28	0.85	2.037	0.042
SAS	2020	3.71	0.84	0.172	0.863
	2021	3.70	0.75	0.175	0.861

Independent samples t-tests were employed to assess the differences in mean scores between participants' responses in 2020 and 2021 across the dimensions of EI, ATB, SN, PBC and SAS. The t-tests results are shown in Table 5.1. For EI, significant differences were found between the two years, with participants in 2020 ( $M = 3.63$ ,  $SD = 1.02$ ) reporting significantly higher scores compared to 2021 ( $M = 3.36$ ,  $SD = 1.07$ ),  $t = 2.980$ ,  $p = 0.003$ . Similarly, for ATB, participants in 2020 ( $M = 3.82$ ,  $SD = 0.83$ ) had significantly higher scores than those in 2021 ( $M = 3.59$ ,  $SD = 0.82$ ),  $t = 3.211$ ,  $p = 0.001$ . The same trend was observed for SN, with participants in 2020 ( $M = 3.48$ ,  $SD = 0.98$ ) reporting significantly higher scores than those in 2021 ( $M = 3.16$ ,  $SD = 0.93$ ),  $t = 3.807$ ,  $p < 0.001$ . Regarding PBC,

participants' scores in 2020 ( $M = 3.44$ ,  $SD = 0.88$ ) were significantly higher than in 2021 ( $M = 3.28$ ,  $SD = 0.85$ ),  $t = 2.029$ ,  $p = 0.043$ . However, no significant differences were observed for the SAS between the two years, with participants in both 2020 ( $M = 3.71$ ,  $SD = 0.84$ ) and 2021 ( $M = 3.70$ ,  $SD = 0.75$ ) having similar scores,  $t = 0.172$ ,  $p = 0.863$  and  $t = 0.175$ ,  $p = 0.861$ , respectively. These results indicate that significant differences exist in the mean scores of EI, ATB, SN, and PBC between the years 2020 and 2021, highlighting potential fluctuations in participants' perceptions and attitudes over time.

The results suggest that the two samples were significantly different in terms of EI, ATB, SN, and PBC. The results showed that a higher proportion of the respondents in the 2020 sample reported that their parents were supportive compared to respondents in the 2021 samples. These differences could be attributed to variations in sample composition or characteristics, which have contributed to the emerging differences in the results. These results provide evidence that during the COVID-19 restrictions, the students in the 2020 sample had a stronger intention to start up a business than those in the 2021 sample. Their attitudes towards starting a business were more positive than those of the students in the 2021 sample. During the COVID-19 restrictions, individuals in the 2020 sample experienced more positive and supportive attitudes from their families and significant others concerning the initiation of a business in comparison to individuals in the 2021 sample. Their level of confidence and ability to start up a business were higher when the COVID-19 restrictions were in place. The SAS results suggested no evidence that the mean value differed between the 2020 and 2021 samples and that the removal of the COVID-19 restrictions did not change the participants' positivity regarding the rules and regulations, government support to entrepreneurs, the economy and political conditions, and institutions' financial supports.

#### **5.4 Discussion of the Longitudinal Approach Findings**

The results obtained from this longitudinal study provide evidence that EI does not necessarily lead to EA among recent graduate students, as about 80% of those who had intended to start a business did not take any action during the six months after finishing their studies. The findings of this study are important in terms of contributing to the existing literature by suggesting that having EI does not automatically translate into EA among recent graduate students. This finding is consistent with the theory of planned behaviour (Ajzen, 1991), which posits that intentions are a strong predictor of behaviour but are not the sole



determinant. Various factors, including perceived behavioural control, social norms, and external circumstances, can influence whether intentions are translated into actions. These findings align with the limited longitudinal EI and EA studies. In Kautonen et al.'s (2015) study, 63% of those identified as having EI in the first wave did not take any EA over a year. Gielnik et al. (2014) found that 45% of the participants with EI had not taken any action 30 months after the data collection in the first phase. This thesis indicates that the EI and EA gap exists and is more severe among the recent graduate population compared with the older population presented in Kautonen et al.'s (2015) and Gielnik et al.'s (2014) studies. However, it is important to note that the time interval between the two phases in this study was relatively shorter compared to the durations observed in studies such as Kautonen et al. (2015) and Gielnik et al. (2014). This might explain, as the participants in this study had a narrower timeframe of six months, potentially influencing their ability to transition from EI to EA.

The change in the level of EI during the COVID-19 period findings adds to the recent COVID-19 literature (e.g., Ruiz-Rosa et al., 2020; Gomes, 2021). Ruiz-Rosa et al. (2020) found that the level of EI decreased slightly during the COVID-19 period compared with before the pandemic. On the other hand, Gomes (2021) found that the EI level remained the same before and during the COVID-19 pandemic. In this thesis, the level of EI reported is slightly lower after the COVID-19 restrictions were lifted. The possible reason for the differences between the three studies is the fact that these studies were conducted in different contexts (Spanish, Portuguese, and Saudi). Therefore, the economic conditions and entrepreneurship cultures in the two developed countries and one less developed country were different during COVID-19.

Our longitudinal approach allowed us to capture changes in intentions and actions over time, providing empirical evidence for the understanding of the entrepreneurial process. By examining participants' behaviours six months after graduation, we were able to identify patterns and trends that may not have been evident in cross-sectional studies. This longitudinal perspective is crucial for understanding the changes in entrepreneurship and the factors that influence individuals' entrepreneurial journey (Davidsson & Wiklund, 2001). The current findings suggest that additional factors beyond mere intention-setting may influence entrepreneurial behaviour. These could, for example, include barriers such as lack of resources, fear of failure, or competing priorities (e.g., Mehtap et al., 2017). Studies have

indicated that aspiring entrepreneurs often encounter personal obstacles, including fear of failure, risk aversion, stress aversion, and the demand for hard work (Welsh et al., 2014a; 2014b; 2014c). Fear of failure stands out as the primary reason globally cited for abstaining from business initiation (Sandhu et al., 2011). Future research could examine these factors to identify strategies for bridging the gap between intentions and actions and fostering entrepreneurial behaviour among recent graduates.

## **5.5 Discussion of the EI findings**

In this study, a survey was conducted on university graduates of Saudi Arabia in 2020 and 2021 to assess their entrepreneurial aspirations and the factors that influence them. The results of the analysis in the previous chapter (Chapter 4) showed that attitudes toward behaviour (ATB), social networks (SN), and perceived behavioral control (PBC) together explained 64% of the variance in entrepreneurial intention (EI), as indicated by the  $R^2$  value, and it was clear that specifically, higher levels of ATB, SN, and PBC were independently associated with higher EI among adolescents. These findings provide strong evidence that the theory of planned behaviour (TPB) model can effectively explain the entrepreneurial aspirations of Saudi university graduates. The significant associations between ATB, SN, PBC, and EI suggest that attitudes, social networks, and perceived control play an important role in entrepreneurial aspirations in the Saudi context. Previous studies conducted in similar cultural contexts have also demonstrated the applicability of the TPB model in predicting entrepreneurial intentions.

The TPB validity was tested in the Saudi context, and the results provide evidence that the model is valid. For the combined two samples of 2020 and 2021, the  $R^2$  value suggests that the ATB, SN, and PBC variables explain 64% of the variance in EI. This means that the higher levels of ATB, SN, and PBC were independently important for greater EI, which suggests a strong association between EI and the TPB antecedents. In other words, the evidence indicates that a positive attitude and the feeling that starting a business is a good thing given the alternatives, leads to higher EI among the young population. When this attitude is combined with positive thoughts and opinions regarding starting a business, from the people most important to the potential entrepreneurs, and when potential entrepreneurs feel that they have the ability to start a business, they will eventually intend to start a business in the Saudi context. It means, that when a person has a positive attitude toward

entrepreneurship and receives positive recognition and encouragement from significant others when starting a business, this significantly affects entrepreneurial intention in the Saudi context. This positive attitude, along with external support from key individuals such as family, mentors, and peers, creates a favorable environment for cultivating an entrepreneurial orientation.

In addition, when potential entrepreneurs believe that they are competent of handling entrepreneurial challenges, they will be more motivated to start a business. This sense of self-efficacy enables individuals to overcome obstacles and seize entrepreneurial opportunities, ultimately leading to the development of entrepreneurial intentions in the Saudi context. Therefore, the combination of positive attitudes, social support, and cognitive abilities are powerful catalysts in developing entrepreneurial aspirations among aspiring entrepreneurs in Saudi Arabia. These findings are similar to those of other EI and EA studies, such as Kautonen et al. (2013) and Kautonen et al. (2015). These researchers found that the three antecedents of the TPB model were all significant predictors of EI in the Finnish context (explaining 41% and 54% of the variance in EI). Additionally, these findings are consistent with those obtained by Ozaralli et al. (2016), who studied the context of the USA and Turkey and found that all three antecedents had a positive significant impact on EI. Even in the Saudi context, Aloulou's (2016) study suggests that EI has a significant correlation with the three antecedents.

In addition, the results in this thesis indicate a significant relationship between the SN antecedent and EI, which differed from those reported by Linan et al. (2009). Most previous studies confirmed that ATB and PBC are significant in explaining EI, but the evidence on the influence of the SN antecedent is mixed. (Zaremohzzabieh et al., 2019) Whilst some studies found that this antecedent is significant for explaining EI, (Pruett et al., 2009) other studies report that the relationship is not significant. It seems that the differences between cultures are behind this discrepancy. SNs are what people in society think or the social pressure related to the intended behaviour (Ajzen, 1991). The support or reactions from students' families and friends regarding their entrepreneurial plans can exert either positive or negative influences on students' entrepreneurial intentions within certain cultural contexts. According to Hofstede (2010), Arab culture is a collectivistic culture, which means that people have a strong sense of belonging to family members or friends. Hence, support from families and

friends and their thoughts about entrepreneurship might influence the EI in such cultures. On the other hand, countries with more individualistic cultures, such as the USA, are different. (Shane & Cable, 2002) In more individualistic cultures, support from families and friends regarding entrepreneurial activities are not as important - this could explain the differences in the results reported in the different studies. It means that Hayne and Cable studied the role of network ties in obtaining funding for new ventures from different cultures. They found that in individualistic cultures that place a high value on personal autonomy and independence, entrepreneurs rely less on the support of family and friends to obtain funding. Instead, they focus on building reputations and networks with professionals and investors. This indicates that the importance of support from family and friends may vary depending on cultural values and norms.

Before the COVID-19 pandemic, a study conducted by Alessa (2019) showed that there was no significant relationship between the three antecedents (ATB, SN, and PBC) and EI. That is, the three antecedents alone could explain only 6% of the variance in EI. The responses against the questionnaire developed was 33%, which could be the reason for the results. The results showed that there was a significant relationship between the three antecedents (ATB, SN, and PBC) and EI but when performed regression analysis it would be reversed according to the authors. However, Alessa's sample was taken from master's students studying at a private university in Saudi Arabia. This could explain why their results were different from the results obtained in this thesis. Master's students would be older than the sample used for this thesis, they might already work as employees and might be settled at their work, so their attitudes toward starting a business could be different from those of undergraduate students. Additionally, most of the students who study at private universities in Saudi Arabia are from high-income families, so they might not have the same interest in starting a business. This is consistent with the correlation analysis in Table 4.5 which revealed that participants with low household incomes were more likely to intend to establish their firms compared with participants with high or medium household incomes. This could explain the difference between the results of Alessa's (2019) study and the results in this thesis.

The finding from the regression analysis in Table 4.6 shows that gender is not associated with EI and is worth discussing. Previous studies showed that male students had more interest in starting new businesses compared with female students. According to Ali et al. (2019), Saudi traditions and culture prevent female students from thinking about or having the intention to

engage in entrepreneurial activities. These traditions include the expectation that women should be at home and take care of children. Additionally, some barriers prevented women from doing business, such as the ban on driving, the ban on traveling without the permission of a father or husband, and other government rules and regulations. Many earlier studies found that females always showed less interest in starting a business compared with males. For example, Ahmad (2011) states that self-efficacy or self-confidence could prevent females from starting a business. However, according to Aloulou (2016), female participants had more interest in starting a business compared with males. These data were collected in 2015, and since that time, significant changes have happened in Saudi Arabia concerning giving Saudi women their rights. These changes include allowing women to drive cars and get a passport and travel without the permission of a father or husband. In addition, one of the strategies of the Saudi 2030 Vision is to empower Saudi women and give them their rights (2030 Vision, 2018). All of these changes, which affect the support Saudi women receive, might explain changes in their intentions to start a business. As this thesis was conducted after these changes took place, it was interesting to see no difference was observed in female EI compared with the EI of male students.

The results suggest that SAS factors are correlated with EI and the three antecedents of the TPB model (see Table 4.5). Additionally, the findings suggest that ATB, SN, and PBC mediate the relationship between SAS factors and EI (see Table 4.9 ). These results indicate that institutional factors, such as a positive attitude about the rules and regulations, government support to entrepreneurs, the economy and political conditions, and institutions' financing support, are all important and correlated positively with greater intention to start a business. Although other EI studies have not combined these factors in one single scale, some have tested the relationship between some of these factors by linking them with EI. For example, Ozaralli et al. (2016) examined the cultural and societal factors. Ozaralli et al hypothesise that the economic and political conditions in any country play a big role in peoples' decisions to start a new business. In this study (Turkey/USA), high inflation, a high unemployment rate, high taxes, corruption, and lack of funds could all discourage students from being entrepreneurs.

Therefore, they hypothesised that students in both the USA and Turkey who think the economic and political conditions in their home country will be better in the coming 5 to 10 years will have higher EI. The researchers also believe that a favourable and supportive

culture towards entrepreneurship would influence students' EI. The researchers hypothesised that the cultural valuation of entrepreneurial activities perceived by students (whether entrepreneurship is considered worthwhile or undervalued) would have a positive or negative impact on EI. The findings of this thesis are consistent with those reported by Ozaralli et al. (2016) that cultural valuations and the state of economic and political conditions are correlated with EI among the research participants.

Furthermore, the finding of this thesis that these institutional factors are linked to start a business aligns with the framework proposed in the GEM report 2020. The GEM framework demonstrates how social, cultural, political, and economic contexts have an impact on entrepreneurship both directly and indirectly by influencing societal values and personal characteristics (GEM, 2020). Therefore, the results of this thesis provide evidence and indications that support the GEM framework, and hence, policymakers in less developed countries should improve these institutional factors to foster entrepreneurial activities among young populations, which would overcome the economic challenges they are facing.

## **5.6 Conclusion**

To conclude, Chapter Four presents the quantitative analysis of the survey results about EI, and these findings led the researcher to answer the question of whether the TPB model and its associated factors hold validity within the Saudi Arabian context. The correlation analysis was useful in assessing the validity of TPB in the Saudi context. The researcher found that the TPB is valid and can be applied in the Saudi context, as all the TPB antecedents correlated with each other and with EI. The researcher created and tested a new scale that can be tested by future researchers in this field. The results indicate the SAS variable was also correlated with EI, ATB, SN, and PBC.

The regression analysis revealed that 64% of the variance in EI is explained by ATB, SN, and PBC. This indicates a high  $R^2$  value, which suggests a strong association between EI and the TPB antecedents. However, after adding the SAS variable to ATB, SN, and PBC as independent variables in the regression equation, the  $R^2$  value remained the same, and SAS did not improve the model.

After examining the direct associations among SAS, EI, ATB, SN, and PBC, the researcher proceeded to investigate the potential mediating roles of ATB, SN, and PBC. The purpose of mediation analysis was to investigate the underlying mechanism governing the relationships between SAS and EI. This thesis's findings revealed significant evidence supporting the idea that elevated levels of SAS are associated with heightened levels of ATB, SN, and PBC. These mediating factors, in turn, contribute to the elevation of EI. This holistic understanding provides important insights into the pathways (i.e., ATB, SN, and PBC) through which SAS influences EI.

The findings of this thesis hold important implications for research, practice, and policymakers. In terms of research, the researcher's exploration into direct relationships among SAS, EI, ATB, SN, and PBC adds to the existing body of knowledge by shedding light on the associations of these factors. Furthermore, the identification of ATB, SN, and PBC as significant mediators between SAS and EI expands our understanding of the underlying mechanisms driving entrepreneurial intentions.

From a practical standpoint, the researcher's findings offer important evidence for individuals aiming to enhance their entrepreneurial intentions. Recognizing the significant roles of ATB, SN, and PBC in the relationship between SAS and EI, entrepreneurs can strategically focus on cultivating these factors to foster higher levels of entrepreneurial intention. Moreover, educators and mentors can tailor their guidance to help students and young entrepreneurs develop stronger attitudes, social networks, and perceived control, which are vital for nurturing entrepreneurial intentions.

For policymakers, the researcher's findings emphasize the critical significance of cultivating an environment that inspires and supports entrepreneurs in initiating and advancing their ventures. The researcher's findings suggest that it would be useful to implement policies aimed at fostering positive attitudes toward entrepreneurship, promoting social support networks, and enhancing perceived control over entrepreneurial actions can contribute to an increased level of EI among the younger population. By prioritizing these aspects, policymakers in various countries, especially in developing economies such as Saudi Arabia, can effectively encourage entrepreneurship and innovation, which, in turn, can potentially lead to economic growth and societal progress.

Chapter Five presented the result of the longitudinal approach. Even though this longitudinal study was subject to attrition in the second wave of data collection (6 months after the students finished their studies), it provides evidence that approximately 80% of the university students who had intended to start up a business had not taken any EA or steps to start up a business during the 6 months after finishing their studies. This finding sheds light on the intention and action gap issue in the young population of developing countries. In addition, as the COVID-19 crisis occurred while the researcher was completing his PhD study, he circulated the survey to another cohort of students due to graduate in 2021 to determine if there were any changes in EI during the implementation and after the removal of the COVID-19 restrictions. Unexpectedly, it was evident that during the COVID-19 restrictions, the students had greater EI to start up a business than after the restrictions were removed. This finding would contribute to the current COVID-19 literature and encourage future researchers to further elucidate whether health and economic crises encourage or discourage EI. Further explanations and deeper understanding will be shown in the following chapter.



## **Chapter Six: Findings of the Qualitative Analysis (EA Barriers)**

### **6.1 Introduction**

This Chapter focuses on the question “What could prevent graduating university students from transforming their EI into EA?” To address this, we take a qualitative approach, which offers a deeper investigation into the barriers and challenges that graduates encounter when attempting to convert their EI into tangible EA. The findings from the surveys on EI discussed in Chapter Four revealed that the TPB antecedents (ATB, SN, PBC) were highly associated with EI and the longitudinal analysis presented in Chapter 5 shows that the EI and EA gap already exists, revealing a more significant gap between EI and EA among recent graduates in Saudi Arabia that reported in other longitudinal studies. A qualitative study was undertaken to explore this gap and to provide a deeper understanding of what barriers and enablers might exist. Therefore, the analysis of the interview data was performed to shed light on the potential factors that contribute to this association between the TPB antecedents and the gap between EI and EA among business students. Moreover, as the data was collected during the COVID-19 pandemic, there was also a focus on understanding the graduates’ feelings and opinions regarding the role of COVID-19 in helping them or preventing them from transforming their EI into EA.

### **6.2 The Main Characteristics of the Participants**

Table 6.1 provides a general overview of the main characteristics of the interviewees. It is important to note that all of the interviews were conducted exclusively with participants from the 2020 sample. In total, eleven participants were interviewed, eight male and three female. Eight participants live in Jeddah City (Western Saudi Arabia), two in Riyadh (Central Saudi Arabia) and one in Madinah City (Western Saudi Arabia). Based on the results of the first wave of the survey, all but one of the participants had intended to start a business during the six months after their graduation from university. Out of the ten participants who intended to start a business, five have taken steps to do so and two have already started and run their businesses. Interestingly, the one, male, participant who had no intention of starting a business, had started to run a business in the six months after graduation. All of those who started their businesses in the six months following graduation were male. Only one female participant out of the three had taken any steps towards starting a business.

Table 6.1: The main characteristics of the interviewed Saudi graduates and their EI and EA

Participant No.	Sex	University	Department	EI before graduation	Taking Steps to start up a business?	Business already started and running (during the six months)
01	Male	Imam Muhammad ibn Saud Islamic University (Riyadh)	Accounting	Yes (strong)	Yes	No
02	Female	King Abdulaziz University (Jeddah)	Finance	Yes	No	No
03	Male	King Abdulaziz University (Jeddah)	Public Administration	Yes (strong)	Yes	Yes
04	Male	King Abdulaziz University (Jeddah)	Marketing	Yes (strong)	Yes	Yes
05	Male	King Abdulaziz University (Jeddah)	Marketing	Yes	Yes	No
06	Female	Taibah University (Madinah)	Business Administration	Yes (strong)	Yes	No

07	Female	King Abdulaziz University (Jeddah)	Business Administration	Yes	No	No
08	Male	Imam Muhammad ibn Saud Islamic University (Riyadh)	Finance	No	Yes	Yes
09	Male	King Abdulaziz University (Jeddah)	Public Administration	Yes	No	No
10	Male	King Abdulaziz University (Jeddah)	Management Information Systems	Yes	No	No
11	Male	King Abdulaziz University (Jeddah)	Health Services Administration	Yes	No	No

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Thematic analysis is a well-established qualitative research method deeply rooted in grounded theory. It focuses on textual data to uncover meaningful patterns and themes, offering flexibility and systematicity to explore complex narratives and answer different research questions (Guest et al., 2011). Researchers conducting thematic analysis thoroughly engage with the data, repeatedly immersing themselves to capture the rich experiences and perspectives of participants. The process begins with open coding, where initial codes are assigned to data segments. These codes are subsequently grouped into potential themes, evolving iteratively to encapsulate primary patterns and essential concepts. Thematic analysis also underscores the importance of reflexivity, encouraging researchers to acknowledge and address any biases that may influence their data interpretation. This approach effectively reveals both explicit and implicit meanings within the data, facilitating theory development, model construction, or practical insights (Boyatzis, 1998; Guest et al., 2011). This research adopted Thematic Analysis and identified six main themes as presented in Table 6.2. These themes encapsulate various aspects related to entrepreneurship, including the financial challenges faced by new graduates, the role of government in fostering entrepreneurship, the acquisition of entrepreneurial knowledge and experience, the common fear of failure among both male and female participants, the unique challenges posed by starting a business during the COVID-19 pandemic, and the factors contributing to the development of EI and EA. These six themes present important evidence about the diverse and complex landscape of entrepreneurship. Each theme represents a distinct facet of the entrepreneurial journey, providing a better understanding of the challenges, opportunities, and dynamics inherent to the EI and EA.

Table 6.2: The main themes.

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Financing as a liability for new graduates
Government involvement in entrepreneurship
Acquiring entrepreneurial knowledge and experience
Fear of failure with male and female participants
Starting a business during COVID-19
Factors that lead to EI and EA

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### **6.3 Financing as A Liability for New Graduates**

As the data analysis in Chapter Five suggests that about 80% of business students, who intended to start businesses, have not taken any EA in the six months after graduating, the research sought more explanation and aimed to shed light on what had prevented those graduates from taking EA. Financing was found to be one of the barriers or challenges that most of the new graduates faced.

#### **6.3.1 The lack of financing as a major barrier to business start up**

The following quotes from participant responses show the difficulty of financing.

*“The thing that prevents me is the lack of capital. I can tell you that capital is the main thing that prevents me from starting my own business”.*

(Participant 09, male, had EI, has not taken EA, and has not started a business since graduating.)

*“So far, I can I tell you that the biggest challenges are getting licences and commercial register, etc., and financing.”*

(Participant 08, male, had no EI, has taken EA, and has started a business since graduating.)

*“It is difficult for someone who only graduated for six months ago to have enough money to start a business”.*

(Participant 11, male, had EI, has not taken EA, and has not started a business since graduating.)

#### **6.3.2 The requirements of financial institutions are hard for new graduates**

Two participants complained about the difficulty of financing their businesses through some of the government and private financial institutions.

Participant 09 stated that

*“.....The problem is that they require you to be an employee and have a salary to get a loan. You are required to show a formal letter from your employer that shows your monthly salary to make sure that you can pay them back. Honestly, I see it hindering young people who want to start a business.”*

(Participant 09, male, had EI, has not taken EA, and has not started a business since graduating.)

When asked about how difficult the requirements are, Participant 09 replied as follows.

*“Disabling. They want you to present the idea of the project and at the same time to be an employee and to provide a financial guarantor. Also, if the financial guarantor is one of your relatives, the financial guarantor needs to provide another financial guarantor.”*

Another Participant tried to get a loan through the Social Development Bank, a government bank that supports Saudi citizens financially so they can meet their necessary obligations. The bank targets those who have a low income in Saudi society (Social Development Bank, 2022). The Participant faced the same barrier as Participant 09, which is the requirement to be an employee to get a bank loan.

*“Honestly, we were trying to raise the capital through a loan from the Social Development Bank. One of the problems of the Social Development Bank is that they restrict the provision of loans to certain activities or certain groups. What if the activities that the bank is covered do not match my interests? Also, they refused to lend to me as I had only recently graduated from the university. It is restricted to certain groups and activities. The other banks would also not lend me the money because I graduated recently unless I can provide a guarantor, who is an employer.”*

(Participant 08, male, had no EI, has taken EA, and has started a business since graduating.)

### **6.3.3 Financing through parents and family**

Based on some of the participants' responses, parents and families are one source of financing, and some graduates prefer to finance their businesses through their parents and families. Participant 06 stated that:

*“It is better that you get the money from your relatives, and not only your relatives, from your family. I feel that it is better than getting the fund through banks.”*

*“I would go to my father or mother. My father was helping me in terms of understanding business in the world, but my mother was the first financier for me. Hahaha!”*

*“It is safer. Yes, I feel it is safer and better. I feel that I will not be under pressure to pay on time. So, I feel my family is safer.”*

(Participant 06, female, had EI, has taken EA, but has not started a business since graduating.)

Another participant agreed that:

*“I would go to the banks, but I prefer if the financial support comes from my family, it is better than taking the money from banks.”*

*“Families are patient, and they do not charge interest.”*

(Participant 10, male, had EI, has not taken EA, and has not started a business since graduating.)

Again, the Participant was asked which member of their family they would go to.

*“Definitely, my father or my mother.”*

Participant 05 also agreed:

*“I would go to my family. My father in particular.”*

*“Because I don’t feel embarrassed when I ask him [Participant 05’s father] for money. He is the one who gives me money without me owing him a favour. I feel like his money is kind of my own money.”*

(Participant 05, male, had EI, had taken EA, but has not started up a business since graduating.)

The Participants were then asked about the reasons why financing through parents and family is better than banks and financial institutions.

*“Yes, these are my parents. If I borrow money from them and later can’t pay them back, they will not send me to jail. But banks could do it.”*

(Participant 11, male, had EI, has not taken EA, and has not started a business since graduating.)

However, financing through family and relatives has its disadvantages. Some family members might take advantage of that and ask for a high percentage on the business shares. Participant 09 gives an example.

*“One of my friends agreed with one of his relatives to be a share partner. His relative said that ‘I will only fund your business and do nothing. You will run the business and do everything. I will just take my profit at the end of the year, and I am asking for 70% of the profit.’ So, I think it is a nice idea to find a relative who will support me financially, but not like this. The partner should be suitable, and he should offer a fair percentage share to me.”*

(Participant 09, male, had EI, has not taken EA, and has not started a business since graduating.)

Another participant was concerned about conflicts between family members as a result of sharing a business, offering shares in exchange for financial backing.

*“I will tell something. For us as Arabs, no, it is not suitable for Arabs, hahahaha! I mean, as an Arab, I could lose a relationship between me and one of my family members because of a business conflict. It always happens. It honestly depends on the mentality of the person that you work with. What I mean is that not everyone is suitable”.*

(Participant 03, male, had strong EI, has taken EA, and has started a business since graduating.)

Also, family financing support is not always available.



*“To be honest, funding through my family is not possible. I mean, there is not enough money to help me to start my own project.”*

(Participant 07, female, had EI, has not taken EA, and has not started a business since graduating.)

It has been noted that Saudi graduates have high expectations that their families will help them in financing their businesses. This is related to the Saudi culture and Hofstede’s cultural dimensions can help in understanding these high expectations (Hofstede, 2010). Saudi Arabia is a collectivist society with strong familial relationships (Cassell et al., 2012). Therefore, this strong relationship leads Saudi graduates to have such high expectations that their parents and family will support them financially. These high expectations are shown in the following extracts.

*“If I need cash to expand. For example, If I want to import fabrics in large quantities, I will need more cash. Thank God, my brothers who are older than me are all employees. So, I expect that if I went and asked them to support me financially, they will side with me, shoulder to shoulder.”*

(Participant 04, male, had a strong EI, has taken EA, and has started a business since graduating.)

*“Certainly, my father would support me because I do not have an income now. Even when I started up my business, I had no income. The first supporter was my family, so they will certainly help me when I decide to start up a business again. They would side with me, shoulder to shoulder.”*

(Participant 06, female, had EI, has taken EA, but has not started a business since graduating.)

*“Honestly, I will not apply to the government support programmes if they only provide financial support. I would not go to them because my family would help me.”*

(Participant 10, male, had EI, has not taken EA, and has not started a business since graduating.)

*“Honestly, I have never asked them to support me in financing a business. But, I am sure if I did ask them they would help me”.*

(Participant 11, male, had EI, has not taken EA, and has not started a business since graduating.)

#### **6.3.4 Avoid financing through banks**

Cassell et al., (2012) stated that uncertainty avoidance plays an important role in Saudi behaviour. Saudis' scores are high in this dimension, which means that they avoid risk-taking as much as possible and prefer to make decisions as a group rather than individually. Due to the high risk involved and the preference to work as groups, some participants do not like bank loans as a way of financing their businesses.

Participant 05 prefers to finance his businesses through a partner and share the risk with him or her instead of taking a bank loan.

*".....I would look for a partner to support me financially. I would also save money from my salary and use it to fund my business. But, taking the money from banks: I don't think so."*

When asked why, he replied that:

*"Bank loans are risky. I mean, if I have another partner, he will take a percentage of that risk with me."* (Participant 05, male, had EI, has taken EA, but has not started up a business since graduating).

In addition to uncertainty avoidance, the lack of experience led Participant 04 to avoid loans from banks.

*"I try to avoid bank loans as much as I can. I do not want to be at risk at this stage in my life. I just started my career and my salary is not that high. I mean, I will try to avoid bank loans as much as I can until I gain more experience."*

(Participant 04, male, had a strong EI, has taken EA, and has started a business since graduating.)

Fear of failure led Participant 11 to avoid bank loans.

*“I can say the fear of losing. I do not want to go to the bank and get a loan and then lose. I have always wanted to get a bank loan, but the fear of losing has prevented me”.*

(Participant 11, male, had EI, has not taken EA, and has not started a business since graduating.)

However, bank loans could be the only available option.

*“I am still concerned about financing my business, and I am against the idea of bank loans. But often people start up their businesses by taking bank loans. Right? I always read about people who have started up businesses. They often have no capital in the beginning, so they borrow the money. I mean they get loans from the bank. Or, they might have saved money for a long time. In my case, I would take a loan from the bank because I still have no capital”.*

(Participant 02, female, had EI, has not taken EA, and has not started a business since graduating).

Bank loans could be the only available option, especially if the amount of finance needed is higher than what a family can afford.

*“It is better that you get the money from your relatives, and not only your relatives, from your family. I feel that it is better than getting the fund through a bank, but if I need a high amount of money, I will have no option but to go to the banks. I have never been against bank loans, but the priority in the beginning is financing through my family.”*

(Participant 06, female, had EI, has taken EA, but has not started a business since graduating.)

### **6.3.5 Self-funding**

Those graduates who started their businesses in the six months after graduating were asked about how they finance their businesses. One participant stated that self-funding was the source of financing.

*“Financing my business was not through my family, nor through a bank loan. It was through a second income.”*

(Participant 03, male, had strong EI, has taken EA, and has started a business since graduating.)

In addition to his family support financing, Participant 04 financed his business by self-funding.

*“In the beginning, I had to pay for the subscription for the web-site and its domain, and the company registration and these types of things. I used the money that I had saved to pay for these things. Also, my brother paid the same amount that I paid, and he became a business partner with me.”*

(Participant 04, male, had a strong EI, has taken EA, and has started a business since graduating.)

## **6.4 Government Involvement in Entrepreneurship**

Based on the participants' answers, it seems that while the Saudi government is making efforts to promote entrepreneurship and providing support programs for those who are in the process of creating their businesses, issues related to a lack of communication between some government agencies and the business schools regarding the government support programs remain. This would prevent business students from benefiting from these programs. In addition, a lack of training and knowledge among some of the government employees would obstruct the process of creating new businesses. Based on the participant responses, bureaucracy and concerns about the possibility of expensive violation penalties also hinder young entrepreneurs from transforming their EI into EA.

### **6.4.1 Entrepreneurship support programs**

One of the Saudi 2030 vision targets is to increase the contributions of small and medium-sized businesses to GDP from 20% to 30% (Monsha'at, 2022). Therefore, the Saudi government created the Small and Medium Enterprises General Authority (Monsha'at). One of Monsha'at's aims is to support new entrepreneurs and help them in the process of creating their businesses. The Participants were asked if they were aware of Monsha'at and its support programs. It seems that there is a lack of communication between Monsha'at and Saudi

business schools regarding the programs it offers to support new entrepreneurs, as was clear in some of the Participants' answers.

*"I have heard of Monsha'at, but I do not know what services it provides."*

(Participant 05, male, had EI, has taken EA, but has not started up a business since graduating).

*"I honestly haven't thought about it [Monsha'at] or heard of it."*

(Participant 10, male, had EI, has not taken EA, and has not started a business since graduating.)

*"No, I do not remember [Monsha'at]. One time I did a presentation at the university about the 2030 vision, but I do not remember reading anything about that."*

(Participant 11, male, had EI, has not taken EA, and has not started a business since graduating.)

On the other hand, some Participants talked about the Misk Foundation even though they had not been asked about it. Misk was founded by Crown Prince Mohammed Bin Salman (MBS) to empower the youth of Saudi Arabia in education and entrepreneurship. The Foundation provides a high-quality and free, intensive entrepreneurship programme for young Saudis (Misk, 2022). Misk Foundation is a non-profit organization that aims to empower Saudi youth. It provides a range of programs and initiatives, including workshops, which are accessible to individuals of both male and female gender.

Participant 04 reflects positively upon the Misk Foundation support program.

*"... Misk offers strong on-line courses. I always read about them. They always offer workshops as well."*

(Participant 04, male, had a strong EI, has taken EA, and has started a business since graduating.)

As the Misk Foundation programmes are offered for free to support young Saudis, Participant 04 was able to attend these courses.

*“These courses are very expensive; they cost four to five thousand riyals (800-1000 GBP). I used to take them through the Misk Foundation for free and I have not paid any riyals for them. It is great that they offer these courses for free as students cannot afford to pay that much.”*

Another participant, who did take EAs in the six months after graduation, said that Misk courses helped him to identify an area for improving his entrepreneurial skills.

*“Before starting my employed job, I enrolled in a course about e-marketing through the Misk Foundation. The course was a great opportunity for me to learn new things. I mean, I found that there are many things that I still need to learn to be able to open a business.”*

(Participant 05, male, had EI, had taken EA, but has not started up a business since graduating).

Therefore, compared to the Monsha’at support programs, it seems that the Misk Foundation team is better able to communicate its entrepreneurship program to young Saudis including business university students.

#### **6.4.2 Lack of training and bureaucracy**

One of the Participants started a business even though he had no intention to be an entrepreneur in the six months following graduation. He complained about bureaucracy and a lack of knowledge and training on the part of some of the government agency employees, and how this obstructed the process of starting his business. Participant 08 illustrated the lack of knowledge held by government employees.

*“The first issue was with registering the business. It was challenging, but I was able to overcome it, thank God. But, it was a challenge to answer the questions about what type of business it is, the main activities of the business, and which business category it falls under. The problem was not the questions as such, but that I could not know or determine under which category my business was supposed to fit. Our business includes activities in two categories provided by the Ministry of Commerce. I asked one employee there and he told me our business should go under one category. I then asked another employee and he said that our business should be under a different category. Unfortunately, I have to choose just one of*

*these category options even though our work includes activities that are under two of the Ministry's. So, those who work in the Ministry of Commerce were not be able to answer my questions."*

(Participant 08, male, had no EI, has taken EA, and has started a business since graduating.)

He also complained about the difficulty of getting a business license due to a lack of knowledge on the part of Ministry of Commerce employees and bureaucracy.

*"Also, getting the business licence was challenging. Each business in Saudi Arabia should be linked to a government agency. So, for example, if I am going to start a pharmacy, I must get a permit from the Saudi Food and Drug Authority. If I am going to open a restaurant, I must get permits from the Ministry of Municipal and Rural Affairs and the Civil Defence, etc. I could not know which government agency is linked to my business. I contacted the Ministry of Commerce and unfortunately, there was no clear answer. Once they told me I should get the permit from the Human Resources Department of the Ministry of Human Resources and Social Development, and once they told me I should get it from the Social Development Department in the same ministry. I went to the Human Resources Department, and they said no, this is not the right place. This is a problem: where do I go to get the permit?"*

He continued complaining about the lack of knowledge and training of employees of the Ministry of Commerce and the Ministry of Human Resources.

*"Even if you get the answer from member of staff, you will not reach your goal. I mean, for example, one of the officers advised me to go to the Human Resources Department to get the permit, and when I went there, a member of staff told me I was in the wrong place. I told him that I had come because an officer at the Ministry of Commerce advised me to do so. He replied that I should go to a different location, the Department's branch at Exit 9. I went there and the first person told me to go to another office. I went there and was told to go to the first floor, where I was told to go the second floor. Then, having by that time visited five offices, I was told that I needed to go to another location: the Goranata branch. I told them that that branch is for Ministry employees only, and if you are not an employee, it is impossible or very difficult for you to get in. But they said that they could not help me and I would have to go there. What am I supposed to do? You know, by the end, I got bored of the permit issue, and someone else got it on my behalf."*

He also complained about bureaucracy in another government agency, that he wanted to keep anonymous.

*“The problem is that there is no flexibility in getting business licences. I went to one of the government agencies to get a permit. They told me to go to another agency to get it. I went there, and was told I needed permission from the first agency before they could issue a permit for me . I went back to the first agency and they added more requirements in order to get the permission. The additional requirements will cost me around 20 thousand riyals (4000 GBP). The requirements that they added were like, if you want to open a restaurant and they say that there is no problem with opening a restaurant, but you have to open a grocery store with it. I don't need to actually open a grocery store, but they insist that I pay for an additional permit that I am not going to use in order to get the business licence for what I do want to do.”*

Another participant talked about how time-consuming it was to obtain municipal licenses.

*“I remember that the company registration did not take very long, but the municipality’s requirements and permits take time. The administration around hiring foreign workers takes time as well. I am not sure if good decisions were made during COVID-19 that might help to make these requirements less onerous, but as I remember it, it is time consuming”.*

(Participant 09, male, had EI, has not taken EA, and has not started a business since graduating.)

Although operating a successful e-commerce store online requires a combination of technical and business skills such as digital literacy, website management, online marketing, product management, and inventory management, running e-commerce can be viewed as more convenient than the traditional business (e.g., restaurant) in terms of operating online, eliminating the need for physical space, rent, and complex logistics. E-commerce can be managed with a smaller team, have lower initial costs, and can reach more national and international customers in comparison to traditional businesses. In support of this, two participants described how easy and fast it was to register a business.



*“... The commercial registry procedure is easy and electronic; it takes you a quarter of an hour. Then you go to a notary and sign it, and that is it.”*

(Participant 08, male, had no EI, has taken EA, and has started a business since graduating.)

*“...The business registration literally takes you three minutes. Literally less than five minutes. Very easy. And registering on Maroof is easy too.”*

(Participant 04, male, had a strong EI, has taken EA, and has started a business since graduating.)

“Maroof” is an Arabic word, which means “known” in English. It is a website created by the Saudi Ministry of Commerce to protect customers from fraud in e-commerce. Customers can go to this website and check if the seller’s website is known and registered with the Ministry of Commerce (Maroof, 2022).

#### **6.4.3 Violation penalties are expensive**

Some graduates talked about the exorbitant violation penalties that are issued by some government agencies.

*“It is very important that the legal requirements for you and your employees are satisfied. Municipality must be in order. My cousin violated these requirements and was just focusing on maximising the profits of his business. Unfortunately, he received a violation penalty of about 70,000 riyals (14000 GBP) six months ago”.*

(Participant 09, male, had EI, has not taken EA, and has not started a business since graduating.)

*“.....If you make a mistake in registering your business and do not specify the business activity carefully, you must pay a penalty of about three to five thousand riyals (600- 1000 GBP) to rectify it.”*

(Participant 08, male, had no EI, has taken EA, and has started a business since graduating.)

*“I hear a lot of people talking about paperwork and legal issues that caused problems for them. I mean, for example, that there is no clarity from the municipality about the law, as many people suffer from receiving violation penalties”.*

(Participant 10, male, had EI, has not taken EA, and has not started a business since graduating.) This indicates that a lack of clarity regarding potential business penalties is impeding their progress.

## **6.5 Acquiring Entrepreneurial Knowledge and Experience**

The terms knowledge, learning and experience were mentioned by the participants. They were talking about entrepreneurial education and training at university and the development of skills and knowledge through employment.

### **6.5.1 University entrepreneurial education and training**

In particular, the Participants were asked if they studied an entrepreneurship course or if they received entrepreneurial training while they were studying at business school. Based on the participants' answers, it seems that there is a lack of entrepreneurial education and training in Saudi business schools. Graduating from Business School without completing any entrepreneurship training might impact young people's confidence, intention and actions to establish a business within six months of graduating. Therefore, they are likely to feel that they do not have the abilities and skills needed to set up a business. This would make it less likely that students would take EAs and have a positive attitude towards setting up a business at the end of their studies.

One Participant, who studied for his bachelor's degree in Riyadh responded: "*No, never, never. We did not study anything like that.*"

(Participant 01, male, had EI, has taken EA, but has not started a business since graduating.)

Another Participant, who studied in Jeddah, said the same thing:

*"No, we did not study these things."*

(Participant 07, female, had EI, has not taken EA, and has not started a business since graduating.)

Participant 07 also talked about an interesting attitude among students at her university: that students were only studying in order to get a job and not to start up a business. Based on her

answer, it was obvious that she had not studied or attended any entrepreneurial course or training at her business school.

*“..... I feel that in university everyone was talking about getting a job after graduation. Everyone wanted to undertake training to make it easier for them to find employment. All the students here were focused on raising their GPAs [grade point averages], so employers would hire them easily. There was nothing to motivate students to set up their own businesses. Even the professors only talked about the importance of learning and getting the degree to find a job. Not one of the professors talked about starting a business.”*

### **6.5.2 Working as an employee develops entrepreneurial knowledge and skills**

The Participants explained the importance of working in the same industry as the business that they are planning to start. This indicates the potential importance of considering a longer timeframe for EA. Participant 01, who is planning to start a business as a chartered accountant, stated:

*“When you work in the same field as that of your planned business, you do not only learn the job itself, but you also learn the administrative organisation skills. So, working in the same field would help to understand the profession itself, the way to establish my own office and how I would go about hiring the best employees, especially as I am a fresh graduate.”*

(Participant 01, male, had EI, has taken EA, but has not started a business since graduating.)

Participant 05 agrees with Participant 01.

*“By working in companies and working in the same sector. This is what would help you to learn how to set a business. This is something I believe in. Some people start their businesses anyway and learn, but I believe that you should work in the same field before starting your business.”*

(Participant 05, male, had EI, has taken EA, but has not started a business since graduating.)

### **6.5.3 Parents as a source of entrepreneurial knowledge**

The Participants who started businesses in the six months after graduating talked about the knowledge they got from their parents and how it has helped them in the process of creating their businesses.

*“Honestly, it is more likely because of the environment in which I grew up. I mean, my father was not a business owner, but since we were young, my father has always told us stories about successful business owners, how they started their businesses and how they solved the problems they faced”.*

(Participant 08, male, had no EI, has taken EA, and has started a business since graduating.)

*“Look, this is something about us. I mean, my parents and my uncles are all business owners. My father always gives me advice and talks about how to start a business, and now when I remember his words, I find that all of them were right.”*

(Participant 04, male, had strong EI, has taken EA, and has started a business since graduating.)

### **6.5.4 Starting a business with no experience**

Some Participants were asked if they could start a business with no experience. Some of them thought that starting a business with no experience was possible and a way to learn.

*“I do think experience is necessary to start up a business. To avoid too many mistakes, I need to understand what is happening around me. But, even if I start with no experience, I would learn from my mistakes and avoid them in the future. Even if I lose one or two times, I would still learn. You can't learn without mistakes. Starting with no experience could help to adjust my plan later or even change it in the future.”*

(Participant 11, male, had EI, has not taken EA, and has not started a business since graduating.)

*“I believe that experience is not a precondition for starting a business. I mean, you will gain experience while you are running your own business. If you sit and wait, you will never gather any experience; you must try it yourself.”*

(Participant 04, male, had strong EI, has taken EA, and has started a business since graduating.)

### **6.5.5 Lack of experience leads to delay in business start-up**

However, other Participants talked about lack of experience as a barrier that has prevented them from starting a business

*“I am still not ready to start my own business. I have had a business idea for a long time, and, God willing, I intend to implement it, but not right now. I still feel a little scared and don't have enough experience.”*

(Participant 02, female, had EI, has not taken EA, and has not started a business since graduating.)

*“I think I don't have enough experience to start a business, and I do not know anyone who has enough business experience to help me. I mean, my mother started her hair and makeup business because she is a professional in hair and makeup, and that is her speciality. But she does not have enough business experience to tell me to do this and to avoid that. I still don't know.”*

(Participant 07, female, had EI, has not taken EA, and has not started a business since graduating.)

*“Look, I am interested in entrepreneurship. I like to follow people who own businesses, but every time I think about starting my own business, I say that I still need more time to learn from life. I feel that I need more time to understand financial matters.”*

(Participant 10, male, had EI, has not taken E action, and has not started a business since graduating.)

## **6.6 Fear of Failure with Male and Female Participants**

There is a consensus that individuals characterized by a lower willingness to take risks (greater fear of failure) tend to be less inclined to engage in entrepreneurial actions, thereby preventing them from starting up a business (Minniti, 2010). It seems that female participants were more likely to be concerned about fear, risk and failure (Minniti, 2010).

### **6.6.1 Fear of failure in female Participants' views**

The following are examples of female Participants' feelings.

*"I don't want to start the business right now and then lose everything and be in trouble."*  
(Participant 07, female, had EI, has not taken EA, and has not started a business since graduating.)

*"I don't know, but I feel that after I finish, God willing, my training course, I should I go and ask people and see how people set up their restaurants or cafes. I mean, I must ask people who have experience in this field, to avoid the mistakes they make. This is because I do not want my business to fail at the first attempt."*

(Participant 02, female, had EI, has not taken EA, and has not started a business since graduating.)

*"I'm still afraid. I don't have the experience that would allow me to take risks and open a business. That's why I told you that I always recommend the idea of having someone with me to help me. I don't like to fail, and I do not like to make mistakes. Honestly, adventure is nice, but I don't want to lose in the end, fail or make a mistake. I don't like making mistakes. I never have liked it. I mean, even at work, when I make a mistake, I collapse."*

(Participant 07, female, had EI, has not taken EA, and has not started a business since graduating.)

### **6.6.2 Fear of failure in male participants' views**

*"Failure is possible, but we are currently on the side of more optimism."*

(Participant 08, male, had no EI, has taken EA, and has started a business since graduating.)

*“Who is not afraid of failure? The fear of failure makes you nervous, but fear will not help you to get the job done. I mean, I am already running the business and fear would not stop me.”*

(Participant 03, male, had strong EI, has taken EA, and has started a business since graduating).

Two male Participants were asked if they were afraid of failure.

*“No, never, never. The capital needed to start the business is to get the chartered accountant certificate. There are no high costs in setting up the office. The office rent and salaries for the employees are not that high. The thing that needs time and effort is the licence. The examination that has to be passed to get the licence is very hard and the success rate is only 13%.”*

(Participant 01, male, had EI, has taken EA, but has not started a business since graduating.)

*“Honestly, since I have started and tried running a business, I feel that, even if I failed, I wouldn't be sad. This is because I have learned many things; I have gained a good experience. It is possible that I could lose financially, but I would gain more experience”.*

(Participant 04, male, had strong EI, has taken EA action, and has started a business since graduating.)

By comparing some of the male and female answers, it is notable that some female Participants are more concerned about fear, risk and failure, but they do not underestimate the risk involved in running a business compared with the males. Also, it should be highlighted that some of the male Participants in these examples have already started businesses in the six months since graduation. Therefore, they might have more confidence than female Participants who have not yet started a business. Moreover, the number of female Participants in the interviews is only three compared with eight male participants, so the conclusion cannot be drawn here that females are more concerned about fear of failure than males. The comparison does however show the differences between some of the female and male feelings when it comes to fear and failure.

## **6.7 Starting A Business During COVID-19**

The three participants who had started businesses in the six months after graduation were asked about the impact of COVID-19 on the process of creating and operating their businesses.

### **6.7.1 COVID-19 as a challenge**

Participant 03 explained the challenges he faced during COVID-19.

*“I had started planning and preparing to start my business before I graduated. However, as soon as I started my business, the Corona period has held us back. Because at that time, all our work was on-line, and you know that the on-line work depends on logistics, whether in the city where we live or elsewhere. During the lockdown period, we were forced to cancel many things and we stopped working, so to speak. This has destroyed and disrupted us. I had to pay the salaries of employees in that time and this was a high cost. The problem is that there was no work and I couldn’t stop paying their salaries. I had to give them their salaries. But now things are fine since life has returned to normal.”*

(Participant 03, male, had strong EI, has taken EA, and has started a business since graduating).

### **6.7.2 Starting a business after COVID-19 restrictions**

COVID-19 had no perceived negative impact on Participant 04.

*“Look, honestly, I can’t tell you if COVID-19 has distributed us or not because I started after Corona. Now it’s almost a quiet time. But if you ask me if I had started at the time of the Coronavirus, I might have been disrupted with the issuing of a business licence. I might have had issues with choosing the fabrics and manufacturing, logistics and such things. But if I had a ready stock, for example, and there is a logistics company, they can take the order from me and deliver it to the consumer. I am working in the medical field, and the medical field in the period of Corona and lockdown was in high demand.”*

(Participant 04, male, had strong EI, has taken EA, and has started a business since graduating.)



### 6.7.3 COVID-19 as an advantage and disadvantage

It should be highlighted that Participant 08, like Participant 03, preferred to leave their business field unspecified. They only said that they are working in the e-commerce industry. It seems that they are concerned that someone could steal their business idea. Their concerns are understood and they were not put under pressure to say exactly what their business ideas are.

*“Before I joined my partners, I knew about the project when it was just an idea. My partners started planning by the end of 2019. As planning was in progress, Corona speeded up the project. I mean, it's like Corona was proving that our business idea was good. Indeed, other sites similar to ours appeared and still exist, but their work is not organised. You know, as an example, Cloud Kitchen exists, but if you go and ask people about it, people still don't recognise it, because it is not organised or has not been promoted. Corona has been helpful to our project idea, but as far as procedures and getting permits, it is not helpful. I mean, for example, one of the reasons that the classification of our business activity in the Ministry of Commerce has been changed to a second category is because of Corona. So, Corona disrupted us in this.”*

(Participant 08, male, had no EI, has taken EA, and has started a business since graduating.)

### 6.7.4 COVID-19 led to business failure

One female Participant, who ran a business while she was studying in her final year, stated that the COVID-19 crisis was one of the reasons she closed her business. Participant 06 had a sad voice when she was talking about shutting down her business.

*“.....what really finished my business was the Corona period. Basically, my business activities stopped. Before Corona, we used to participate in events taking place around the country, whether it was in the city of Yanbu, where I was studying, or in Madinah, where my family lives. I was working at these events. I mean, I used to go to the market and deal with customers and such like. In the last year, when Corona came, things got confused. Everything has gone on-line and electronic. What has happened is that people put in fewer orders. So, I have gone from the growth stage to the stage of deterioration. This is what happened to my business.”*

(Participant 06, female, had EI, has taken EA, but has not started a business since graduating.)

As a follow-up, Participant 06 was asked for her opinion regarding the impact of COVID-19 on businesses in Saudi Arabia. This is what she said.

*“I can say that it was 50:50. I mean, not that all of them were affected. Some people were really affected, and they shut down their businesses. I mean, in the beginning of Corona, no one knew what would happen tomorrow. It was like the end of the world and the situation was stressful. In my business, for nearly a year or at least more than six months, no-one ordered and bought from me. I mean that people were thinking that they should save their income and save their money, and didn't know what could happen tomorrow. At the same time, the lockdown was 24 hours, and then there was a partial lockdown; the situation was stressful, meaning no-one knew what to do.”*

#### **6.7.5 COVID-19 created problems for new entrepreneurs**

Also, Participant 09 stated that COVID-19 has impacted his relatives' businesses.

*“Two of my cousins are business owners. One of them has a café in Jeddah, may God grant him success. And the second one has an ice cream shop in Jeddah as well. He has new ideas for ice cream flavours. The first one started up his café during the Corona crisis and faced many problems in his business. The second one started before Corona, let us say two years, and he also faced many problems in the period of Corona.”*

(Participant 09, male, had EI, has not taken EA, and has not started a business since graduating.)

Then Participant 09 was asked to explain more about the type of problems they have faced. He answered as follows.

*“His ice cream is natural, and because of the Corona crisis, most of the ice cream he had was expired because he had bought a lot of ice cream at once. Also, he had to pay for renewing the workers' residence permits and expenses, and other things. I can say that it has created problems for him. I mean, he was still at the stage when he had yet to get back the money he had paid to set up the business. So, he faced some problems during Corona that*

*prevented him from getting back the same amount. This is about the owner of ice cream shop. The brand is currently well known in Jeddah. It has three branches and I wish them success, God willing.”*

*“Regarding the Café owner, the ownership of the shop is divided between my cousin and one of my aunts, as well as an external partner who is one of my cousin’s friends. So, they started this business during the Corona crisis, unfortunately. I see that they did not choose the right timing. And they faced many problems that affected their income. I mean, they were not able to get back even half of the amount they had paid to start the business.”*

Based on the Participants’ answers, COVID-19 has disrupted the processes of creating some of their businesses and could be considered a barrier. However, it seems that COVID-19 has changed the behaviour of businesses and customers. As many customers shifted to online shopping and many businesses started offering their services online, there is a chance that COVID-19 has created business opportunities for new graduates. Also, as the Participants indicated that e-commerce is easy to start and expand, there is a possibility that the ease of e-commerce, combined with the opportunities that COVID-19 created, increased the level of EI among the students when they were in their final year of studies. This would also help explain why the EI was higher during the COVID-19 restrictions as the results of quantitative analysis suggested. It was not possible to conclude that COVID-19 was a definite barrier to new graduates in setting up businesses, as it has helped some of them.

## **6.8 The Factors That Lead to EI and EA**

Based on the TPB model, the three antecedents: ATB, SN and PBC influence the level of EI, which could lead a person to adopt entrepreneurial behaviour (Ajzen, 1991). The result of the quantitative analysis in Chapter Four provides evidence that supports the validity of the TPB model. In this chapter, the participants’ interview responses provide more detail about the reasons for their EI. The analysis of the interview data was performed to shed light on the potential factors that contribute to this association among business students. Under the following sub-themes, participants’ explanations of why they intended to start businesses are linked to the three antecedents of the TPB model to better understand and explain the factors that lead to EI and EA.

### **6.8.1 EI and EA as a response to an opportunity**

According to the GEM report, 90% of the surveyed adult population of Saudi Arabia believes that there are opportunities to start businesses and 86% believe that they are capable of doing so (GEM, 2020). Based on some of the Participants' answers in this thesis, finding a business opportunity could create and lead to EI and EA.

One participant intended to start a business when he saw an opportunity in the accounting field, which had created a positive attitude to starting a business. According to the TPB model, a positive ATB leads to EIs (Ajzen, 1991).

*“This idea came to me from the days when I was studying at university. I mean, I used to see the number of chartered accountants' offices. There were only 200, and the number of registered companies was over a million. All companies need chartered accountants at the end of each year. This is very tempting”*

*“..... and also started preparing for professional exams, which are required to obtain the necessary qualification to work in the profession. As for the exams, they cover five subjects. I just have to pass the exams to get the qualification, and I have 8 months of work experience, so that I can open my chartered accountancy office.”*

(Participant 01, male, had EI, has taken EA, but has not started a business since graduating). This strong EI, driven by an opportunity, has led Participant 01 to take some entrepreneurial steps to start his chartered accountancy practice during the six months after graduating.

### **6.8.2 Push factors and EI and EA actions**

Push factors could also create a positive ATB toward EIs, which would lead eventually to starting a business. Based on the participants' answers, a lack of job opportunities during the COVID-19 pandemic led them to the intention to start a business. This was clear in some of the participants' answers.

*“...It was necessary for me to start a business. Why open a business? During COVID-19, everyone said that there was no employment and no jobs. Indeed, it was clearly a little hard*

*and no one wanted to employ people. So, it is possible that it had an effect. That's why I thought about starting up a business: because there were no jobs available....”*,

He has also taken some entrepreneurial steps or action as a response to the lack of job opportunity in the Saudi market. *“The first thing I did was to create an Instagram account and design a profile.”*

(Participant 05, male, had EI, had taken EA, but has not started up a business since graduating.)

It should be noted that, while “necessity entrepreneurship” can increase the number of small and medium enterprises in a country, some researchers argue that it makes a less positive contribution to GDP than entrepreneurship driven by opportunity. Businesses that are created as a response to opportunities are dominant in developed nations, while necessity entrepreneurship is dominant in low-income countries and less developed nations.

Opportunity-based businesses are more likely to grow. As a result, more employment is created and unemployment decreases (Bratu et al., 2012). Therefore, entrepreneurship that is opportunity-driven seems to be more beneficial to the economy. Promotion and support of entrepreneurship that is primarily opportunity-driven might have significant benefits for economic growth and development in Saudi Arabia. By placing emphasis on contributing to an environment that encourages individuals to identify entrepreneurial opportunities, Saudi Arabia could position itself to benefit from the advantages of its economy. This approach can lead to the creation of new businesses and industries, increased innovation, job creation, and a more profitable business in the country.

### **6.8.3 Parents and family and EI**

Participant 04’s response shows that families can also create a positive ATB towards EIs and starting up a business with their children.

*“.....but you can say that the benefit I got from my family in this matter is that they inspired me to start a business”.*

(Participant 04, male, had a strong EI, has taken EA, and has started a business since graduating.)

Also, having business-owning parents could have an impact on the PBC antecedent; i.e. a potential entrepreneur can be more confident that he or she is capable of starting a business, which could lead to EIs.

*“... So, he (Participant 05’s father) did not open in Mecca because of this, but he shut the shop in Al Bahah. This is what I was thinking about: I expect that if I had not been employed, my father would help me open the shop again.”*

(Participant 05, male, had EI, had taken EA, but has not started up a business since graduating.)

SN also an antecedent of EI, refers to the social pressures surrounding the intended behaviour, or the effect that the thoughts and opinions of influential people have on an individual’s decision as to whether or not to engage in that behaviour (Ajzen, 1991).

Participant 06 has EI and her father’s thoughts and opinions regarding starting a business were positive and inspiring.

*“To be honest, I got my passion to start up a business from father. My father is a business owner..... ”,*

(Participant 06, female, had EI, has taken EA, but has not started a business since graduating.)

#### **6.8.4 Government support programmes and EI and EA**

Government support programs that target university students and new graduates also could play a role in the two antecedents identified in the TPB. They could create a positive attitude towards starting a business and they could influence the PBC antecedent. Eventually, this can lead to EI and to turning EIs into EAs. The following extract shows an example of the support programs and their impact on EI and EA.

*“I have already started my business: it has been running for two months. The main thing that made me switch to a marketing major is that I took a course at the Misk Foundation that is owned by Crown Prince Mohammed Bin Salman. I took a course on digital marketing. Before*

*that, I was studying finance. After that, to be honest, I switched to marketing and started reading about e-commerce and digital marketing, and all these things. After that, it came to my mind that I wanted to start a business...*”

Participant 04 was asked to provide more details about the steps he had taken before starting his business: *“The first thing I did was I set up a commercial register, and a bank account linked to the commercial register, and a web-site, with its own domain, an Instagram account and a business mobile number. All these things were designed to be official.”*

(Participant 04, male, had a strong EI, has taken EA, and has started a business since graduating.)

### **6.8.5 E-commerce ease and cost leads to EI and EA**

The interview template did not include questions about e-commerce but many of the graduates talked about the advantages of e-commerce, how it had created ATB and EI for them and how it has helped them in taking EAs.

Participant 06, has taken some entrepreneurial steps and plans to start an e-commerce business. When asked about the reason for choosing e-commerce, she said:

*“E-commerce is low in costs. Honestly, I am a supporter of e-commerce in everything. I even feel that all shops need to have e-commerce. I feel it has a lower cost. And it is faster for people. Not everyone prefers to go outside for shopping, unless for entertainment, or to break their routine. The e-commerce is very much better in many things”.*

(Participant 06, female, had EI, has taken EA, but has not started a business since graduating.)

Participant 04, who is currently running his business

*“.....So, the thing that helped me to start my business is that it is an e-commerce business. I mean, the capital that was needed at the beginning was under 5000 riyals (1000 GBP),* He added that he did not even have to create a web-site from scratch himself. A well-known company in Saudi Arabia called ZID helped him. ZID is an e-commerce partner that enables new entrepreneurs to create their e-stores easily. Clients can pay monthly or yearly for the

service (ZID, 2022). *“It costs me 200 riyals a month (40 GBP). It is considered a low fee for the services they provide to you. I mean, they give you a ready-made web-site, and you can adjust it as you want, so you can start the business up, which is considered a very low level of capital for a business like this.”*

(Participant 04, male, had a strong EI, has taken EA, and has started a business since graduating.)

Another participant has taken some steps to start a business and built a page on Instagram. Participant 05 explained how much it cost him to build the Instagram page for his business.

*“In addition to the time I spent, it cost me 500 riyals (100 GBP) to design the identity for the account....”*

(Participant 05, male, had EI, has taken EA, and has not started up a business since graduating.)

Participant 03, who started and ran his business six months after graduation, has an e-commerce business. He thinks that e-commerce grows easily.

*“Now the work is all on-line. You do not need to have land or physical stores to expand and grow. E-commerce business growth is the easiest.”*

(Participant 03, male, had strong EI, and has started a business since graduating.)

Participant 03 was then asked what he meant by “the easiest”? He replied as follows.

*“I will tell what I mean. For example, I have this e-commerce store. I don't need to set up two or three physical stores in the city of Jeddah. I don't need to place a store in the east and a store in the west, and a store in the north and a store in the south, so that I can cover the largest number of customers. For example, on-line, I can contract with Aramex to provide warehousing services, where they can take all the goods from you or specific parts. Then, they work out the logistics. So, this makes it easier for me to expand. Expanding through on-line connections is the easiest.”*

Therefore, as the graduates indicated that e-commerce is easy to finance and expand compared to traditional businesses, e-commerce may have created a positive ATB towards



EIs and EAs. Also, it is possible that e-commerce influenced their PBC, which enhanced their levels of confidence. Eventually, this may have led them to think that they were capable of starting businesses, so giving them the EI to start up a business.

## **6.9 Discussion of the EA Barriers**

The results of the analysis of the semi-structured interviews showed that the entrepreneurial journey of new graduates is marked by various challenges and factors. Financing poses a significant constraint, with the lack of access to funding serving as a major barrier to business start-ups. In earlier studies, the role of crowdfunding was highlighted as a solution to the lack of access to funding. Crowdfunding, distinct from traditional offline financing methods like banks and business angels, represents an ideal business model or strategy for sourcing funds within the digital realm. It has unique characteristics such as being easily accessible to a wide range of potential entrepreneurs, having an online presence, and tapping into a diverse pool of potential investors (Gerber & Hui, 2013). This approach leverages online platforms to gather financial support.

### **6.9.1 Financing as a liability for new graduates**

Financial institutions have strict requirements that prove difficult for new graduates to meet. However, alternative financing options through parents, family, and self-funding offer potential solutions. In Saudi Arabia, access to financial services and bureaucratic offices for men and women, including new graduates, may be subject to certain gender-segregated norms and practices. While the situation has been evolving with recent social and economic reforms under Saudi Arabia's Vision 2030 initiative, gender segregation has traditionally been a prominent feature of Saudi society. They have different challenges when accessing financial services and bureaucratic offices due to cultural and legal constraints (Doumato, 1999). For instance, a Saudi female electronics engineer aiming to invest in cutting-edge manufacturing enterprises incorporating female employees encountered challenges in securing the necessary official authorizations and finance for her company's "affirmative action" initiative (Doumato, 1999). Nevertheless, the existing policies do not expressly incorporate measures for promoting gender equality (Qureshi et al., 2023). Saudi Arabian legislation mandates gender segregation, leading to distinct public areas designated for women in various settings such as educational institutions, charitable organizations, healthcare facilities, dining establishments, and government premises (Meijer, 2010). Ooi and

Ahmad (2012) conducted a study investigating the perceptions of entrepreneurship, motivators, obstacles, and challenges among undergraduate students in Malaysia regarding starting new ventures. The results indicated that motivators such as change management and extrinsic rewards inspire students to start new ventures, and government assistance/support serves a significant role in promoting entrepreneurship. On the other hand, challenges and obstacles such as operational and financial problems prevent their efforts to launch new businesses. Additionally, the study demonstrated that gender significantly affects one's entrepreneurial intention.

### **6.9.2 Government involvement in entrepreneurship**

Government involvement in entrepreneurship is evident through entrepreneurship support programmes. However, a lack of training, bureaucratic hurdles, and the possibility of facing expensive violation penalties hinder graduates' ability to benefit from these programs. Acquiring entrepreneurial knowledge and experience is crucial, with university education, work experience, and parental guidance playing important roles. Fear of failure is observed among both male and female participants (with females being more anxious about entrepreneurial intentions and actions), influencing their decisions and actions related to entrepreneurship. Starting a business during COVID-19 presents challenges, but also opportunities and disadvantages. Finally, several factors contribute to EI and EA, including recognizing opportunities, push factors, family support, government programs, and the ease and cost-effectiveness of e-commerce. These findings provide important insights for graduates and stakeholders exploring the entrepreneurial landscape. A detailed discussion of these findings and their interconnections with the existing literature and research in the field is provided below. Misk Foundation in Saudi Arabia (2022) also facilitates the growth of society by offering avenues for learning, development, and advancement across various domains such as business, literature, culture, science, and technology. This is achieved through the establishment of nurturing incubators and the promotion of reputable institutions that create an inviting and stimulating environment for progress.

The result of this study indicated that accessing appropriate financing poses a significant challenge and liability for new graduates commencing entrepreneurial ventures. The absence of sufficient funding emerges as a significant barrier impeding the establishment of businesses. Existing research highlights the multifaceted challenges that entrepreneurs

encounter in overcoming obstacles associated with business start-ups (Baum, 2015). This research suggests that prioritizing elements of the population exhibiting a greater inclination towards EI and EA is likely to result in enhanced efficiency for such start-ups. This underscores the fundamental importance of financing in shaping EI and EA, and the obstacles faced by encouraging entrepreneurs to secure necessary funds (Baum, 2015), alongside a hint of skepticism towards financial institutions such as banks.

This thesis's findings also showed that financial institutions have strict requirements that can be quite frightening for new entrepreneurs. A study by Zarrouk et al. (2020) conducted in the United Arab Emirates revealed that having control over finances, achieved through personal funding as well as access to external sources of finance, greatly contributes to an entrepreneur's autonomy and improves the performance of small and medium-sized businesses. Specifically, the success of an entrepreneur's business is influenced by the availability of funds to seize commercial and market opportunities. However, when entrepreneurs pursue and implement an innovative strategy, it becomes possible to facilitate access to finance. This can be achieved through traditional financial institutions or through government funding programs that aim to attract highly promising innovators (Zarrouk et al. (2020). This suggests that young entrepreneurs may face difficulties when trying to get loans from banks because they don't have a long financial history or collateral.

In light of this obstacle, new entrepreneurs frequently seek alternative funding options, such as relying on their parents and family for financial support. This finding is consistent with the research conducted by Wibowo et al. (2019), who demonstrated the significant role played by informal networks, including family and friends, in providing support to entrepreneurs. Specifically, Wibowo et al. (2019) emphasized that perceived educational support, perceived structural support, perceived informal network support, and perceived informal support exerted significant influences on EI. This highlights the importance of various forms of support networks, including familial and informal connections, in shaping and fostering EI and EA (Wibowo et al., 2019).

Additionally, this thesis's findings indicated that graduates generally avoid relying on banks for financing their businesses. This avoidance stems from a desire to minimize risks and a preference for making decisions as a group rather than individually. Some participants expressed a lack of interest in bank loans as a way to fund their ventures, likely due to the

perceived high risk involved and their inclination towards collaborative decision-making. Supporting the current findings, previous research confirms that in the presence of high risks, new entrepreneurs tend to feel more afraid of failing, become less ambitious, and have less tolerance for uncertainty. As a result, they may prefer to play it safe and avoid taking high risks. This cautious approach can impact their decision-making when starting their businesses (Bate, 2022).

Furthermore, the researcher in this thesis found that some graduates find self-funding to be an attractive option rather than funding from a family or bank loan. That is to say, new entrepreneurs use their resources and savings to finance their business ventures. This could be related to the challenge to meet their requirements. In a study conducted by Wright (2017), an examination of available financing options and their alignment with the existing entrepreneurial ecosystem demonstrated the complex dynamics of funding for supporting entrepreneurs. The study revealed that securing financing or acquiring funds presents challenges within the entrepreneurial landscape, particularly for young entrepreneurs and entrepreneurial students. These individuals frequently face obstacles in accessing the essential financial resources required to sustain and develop their business ventures (Wright, 2017). These findings suggest the importance of financing in entrepreneurship, the difficulties with traditional banking, and the value of alternative funding (i.e., self-funding) options for new graduates starting their businesses.

This thesis's findings also revealed that despite government efforts to promote entrepreneurship and provide support programs, communication gaps between government agencies and business schools, lack of training among government employees, bureaucracy, and concerns over expensive violation penalties hinder the transformation of entrepreneurial intentions into actions for young entrepreneurs. Entrepreneurship support programs such as MISK Foundation in Saudi Arabia, which several participants have engaged with and the other support programme that had very little resonance, are crucial for facilitating the establishment of entrepreneurial ventures. Nevertheless, the lack of effective communication and awareness poses significant obstacles for new entrepreneurs in initiating their businesses. Previous research showed that to drive economic development, governments should be involved in supporting entrepreneurs by implementing various programmes that may foster the emergence of new ventures and support entrepreneurial activities with substantial growth prospects (Stam et al., 2009). This suggests that there is a positive impact of government

programmes in stimulating entrepreneurial activities and promoting economic growth (Raposo & Paço, 2011). In this context, the important role of education becomes even more evident. Education can serve as a powerful tool for promoting entrepreneurial activities by equipping individuals with the necessary skills, knowledge, and mindset to explore business opportunities, develop innovative ideas, and overcome potential challenges. Nurturing education as an important component of government initiatives can fuel a positive cycle of growth and development (Misk, 2022; Nieva, 2015; Ozaralli et al., 2016). As individuals become better equipped to navigate opportunities and manage risks, entrepreneurial activities become more robust, leading to increased economic prosperity.

Nonetheless, the absence of sufficient training for employees within government agencies and the presence of bureaucratic impediments create significant challenges in fostering an entrepreneurial environment. Research stresses the necessity of enhancing training programs to enhance the skills and knowledge of government agency employees. This, in turn, will help overcome bureaucratic obstacles and stimulate entrepreneurial intentions (Osemeke, 2012). Another study conducted by Alturki and Braswell (2010) found that Saudi entrepreneurs encountered more significant challenges in multiple dimensions of their entrepreneurial journey compared to their counterparts in the MENA region. Specifically, a higher percentage of Saudi entrepreneurs reported difficulties in joining formal networks, navigating bureaucratic processes, managing paperwork, maintaining work-life balance, and accessing capital. This study suggests the unique challenges faced by Saudi entrepreneurs and highlights the need for targeted support in overcoming these obstacles. Additionally, the existence of expensive violation penalties creates difficulties among entrepreneurs. Researchers (e.g., Han, 2019) emphasize the importance of equitable penalty systems that encourage compliance without stifling entrepreneurship. This involves promoting equity-based funding, supporting innovation, and reducing the costs of business failure to facilitate recovery and encourage new challenges. The evidence presented in these studies brings into focus the necessity for changes in the support mechanisms for Saudi entrepreneurs. By addressing the specific challenges they face, and implementing and encouraging innovation, Saudi Arabia can create a thriving entrepreneurial environment that benefits both entrepreneurs and the economy at a broader level.

Governments worldwide aim to promote entrepreneurship, but the reasons for such intervention differ. While some governments promote entrepreneurship to generate

employment opportunities, others do so to foster market competition, which leads to reduced prices. According to Michael and Pearce (2009), innovation not only increases competition, lowers prices, and creates jobs, but, more significantly, it generates wealth for individuals and nations through entrepreneurship. It establishes a connection between the insights provided by Michael and Pearce (2009) and the findings from recent research, demonstrating how the multifaceted benefits of entrepreneurship align with the diverse objectives pursued by governments worldwide.

### **6.9.3 Acquiring entrepreneurial knowledge and experience**

Furthermore, this thesis's findings demonstrated that acquiring entrepreneurial knowledge and experience was highlighted by several subthemes as playing substantial roles in the development of entrepreneurs' skills and knowledge through employment. Firstly, the findings showed that the absence of entrepreneurial education and training in Saudi business schools can significantly impact the confidence of graduates, leading them to perceive a lack of necessary abilities and skills for starting a business, thereby reducing their EI and taking EA and adopt a positive attitude towards entrepreneurship upon completion of their studies. Earlier research found that university entrepreneurial education and training services as fundamental foundations for equipping students with the necessary skills, knowledge, and mindset to foster EI and EA (Aransyah et al., 2023). Entrepreneurship education plays an important role in fostering a strong entrepreneurial culture. The outcomes of such education, including entrepreneurial knowledge, skills, and attitudes, are instrumental in enhancing this culture (Burger et al., 2005).

Secondly, the data of this thesis suggested that working as an employee provides valuable opportunities for graduates to gain practical experience on the job and develop essential entrepreneurial competencies such as organization skills. This is further supported by the fact that one needs to be an employer to secure loans, which reinforces this notion. In line with this finding, available evidence suggests that the workplace can create a positive atmosphere for employees to perform effectively and achieve desired outcomes, enabling them to enhance their skills and capabilities (Sugiarti, 2022).

Thirdly, the knowledge, guidance, and support gained from parents can also significantly contribute to the entrepreneurial journey of young entrepreneurs in establishing their

businesses, suggesting the impact of parental influence on EI and EA. Indeed, the moral aspect of support from parents, relatives, or friends can be a crucial factor in an individual's entrepreneurial journey. While financial support and business knowledge are tangible forms of assistance, moral support plays an equally vital role. Having a support system that believes in the entrepreneur's vision and provides encouragement during tough times can boost their confidence and determination. Parents, in particular, often serve as a source of emotional support. Their belief in their child's abilities and dreams can inspire the entrepreneur to persevere through difficult moments. Furthermore, moral support can help alleviate the fear of failure, which is a common barrier to entrepreneurial action. When individuals know they have a network of loved ones who will stand by them regardless of the outcome, they may be more willing to leap into entrepreneurship. This finding is in accordance with those of previous research showing that individuals who receive both moral and financial support from their families tend to be more successful in their businesses and demonstrate better decision-making abilities (Shahzad et al., 2021).

Fourthly, the analysis of this thesis uncovered that participants believe in the feasibility of starting a business without prior experience, considering it to be a valuable opportunity for learning and growth, although it may pose challenges for some new entrepreneurs. In the extant literature, research showed that having prior experience in management, entrepreneurship, or investment increases the likelihood of employees engaging in corporate venturing activities (Guerrero et al., 2021). Earlier employment experience provides entrepreneurs with important skills in business operations, customer needs, and workplace dynamics. However, the lack of experience can lead to delays in business start-ups as new entrepreneurs work towards acquiring the essential skills, overcoming fear, and securing sufficient financial resources. In this regard, Mandipaka et al. (2014) observed that during the early phases of business establishment, entrepreneurs frequently encounter challenges regarding liquidity and financial constraints.

#### **6.9.4 Fear of failure with male and female participants**

Moreover, this thesis's findings showed that both men and women recognized that fear of failure can hold them back from starting businesses. Women expressed more concerns about fear, risk, and failure and highlighted the importance of guidance, learning from mistakes, and having a supportive environment. On the other hand, men had different viewpoints, with

some acknowledging the possibility of failure due to costs and licensing challenges, while others emphasised the value of learning from experience and personal growth, even if it meant facing financial losses. Research findings have highlighted that the fear of failure acts as an obstruction for individuals, particularly among women when it comes to participating in entrepreneurial activities (Minniti, 2010). This fear of failure is linked to factors such as uncertainty, risk aversion, and diminished motivation, which consequently hinder the establishment of businesses by new entrepreneurs. Therefore, the fear of failure can potentially affect entrepreneurial activities and serve as an obstacle to their success (Kong et al., 2020; Liu et al., 2011). Addressing and mitigating the fear of failure and concerns among new entrepreneurs, irrespective of gender, is important in fostering an environment where they can confidently pursue the goals set up for their business. In this regard, various stakeholders, including government bodies, educational institutions, business associations, and support organizations can take a role in addressing and alleviating the fear of failure and concerns faced by new entrepreneurs. A study by Kong et al. (2020) investigated the moderating impact of business role models and fear of failure on the link between entrepreneurial intention and behaviour. The findings revealed that: entrepreneurial intention positively affected entrepreneurial behaviour; fear of failure attenuated the relationship between entrepreneurial intention and action; and the moderating effect of business role models on entrepreneurial intention and behaviour was verified. In conclusion, entrepreneurial intention was found to be positively associated with entrepreneurial behaviour, fear of failure hindered college students from engaging in entrepreneurial behavior, and having business role models will enhance their entrepreneurial intentions.

### **6.9.5 Starting a business during COVID-19**

The findings of this thesis further showed that the impact of COVID-19 on starting businesses varied among the participants. Some experienced disruptions and financial difficulties due to the pandemic and had to move forward through lockdown restrictions. On the other hand, some participants benefited from the high demand in certain fields during the pandemic. COVID-19 had both positive and negative effects, creating opportunities but also presenting challenges and barriers. It influenced customer behaviour, especially with the rise of online shopping, and made it easier to start and expand e-commerce businesses. According to the survey results discussed in Chapter 5, higher levels of EI were reported among students in their final year of studies whilst the COVID-19 restrictions were in place. While the



pandemic facilitated the success of certain ventures, such as in the medical sector, it also introduced challenges related to procedures and permissions for starting new businesses. Some participants even faced business failure due to reduced orders and the shift to online platforms. In line with the current findings, research conducted in the context of the COVID-19 pandemic demonstrated that the COVID-19 pandemic has had a significant impact on businesses (Fairlie & Fossen, 2022; Ruiz-Rosa et al. 2020; Gomes, 2021). It has brought challenges and opportunities for new entrepreneurs (Stephan et al., 2020). A study investigating the challenges and opportunities arising from the COVID-19 pandemic revealed various strategies employed by entrepreneurs (Harima, 2022). These strategies included shifting market focus, leveraging institutional strengths, digitalizing networks, activating social capital, responding to crisis-induced demand, and adapting services and products to the digital realm. These strategies were then categorised into three types of entrepreneurial responses: balancing between multiple institutions, mobilizing social capital, and adapting value creation. The study also identified factors such as individual agility, digital capacity, embeddedness, industry-specific impact, and country-level impact, which collectively influenced entrepreneurship during times of crisis (Harima, 2022). This suggests that the COVID-19 pandemic has disrupted economies, changed how people buy things and imposed restrictions on different industries. This has made it harder for new entrepreneurs to start their businesses. However, as the pandemic restrictions are lifted, entrepreneurs can expect the chance to recover and grow their businesses. This transition period can be a good time for entrepreneurs to change their business plans, follow new trends, and meet the changing needs of customers.

### **6.9.6 Factors that lead to EI and EA**

Finally, the current findings in this thesis showed that there is a wide range of factors influencing EI and EA. Business opportunities drive individuals to develop EI and engage in EA. Recognition of market gaps fosters positive attitudes, leading young entrepreneurs to pursue qualifications for business establishment. Also, push factors, especially during the pandemic, motivate individuals to consider entrepreneurship due to a lack of job opportunities. Participants respond by establishing ventures and using online platforms for promotion. Additionally, parental influence on EI is evident as participants acknowledge the support received from their families. Business-owning parents contribute to increased confidence in starting and running a business. Furthermore, government support programs

shape EI and EA by fostering positive attitudes and influencing participants' perceptions of their capabilities. Programmes provide resources and facilitate readiness for business initiation. Moreover, e-commerce's ease and affordability facilitate EI and subsequent EA. It offers lower costs, wider market reach, and expansion without physical stores, influencing perceptions of feasibility and boosting confidence in entrepreneurial ventures. These suggest that there are various factors influencing EI and EA and these factors contribute to fostering positive attitudes, enhancing individuals' perceptions of their capabilities, and encouraging the establishment of business and the use of online platforms for promotion.

Research findings have demonstrated the significance of various factors in affecting EI and EA. One study by Ali et al. (2022) revealed a significant relationship between the demographics of young adults and their intention towards entrepreneurship. This is relatively consistent with the findings of this study about variables such as income, and family background. The study also found that confidence in entrepreneurship and outcome expectations exerted a significant impact on EI, even after controlling for variables such as family size and working status. Similarly, Hu and Ye (2017) conducted a study involving students and identified entrepreneurial self-efficacy, entrepreneurial alertness, gender, entrepreneurial education, and previous entrepreneurial experience as key predictors of EI. Furthermore, Yu et al. (2021) explored the influence of personal attitudes, subjective norms, and personal behavioural control on EI. Their study also highlighted the moderating role of government support in these relationships. During the pandemic, Nguyen et al. (2021) conducted research that underscored the importance of confidence and risk-taking as influential factors in EI. Moreover, studies have emphasized the significance of employing appropriate EA strategies, such as crisis planning, business model pivoting, frugality, financial prudence, networking, and social connecting, in fostering business continuity, sustainability, and resilience (Krishnan et al., 2022). Additionally, the growing prominence of e-commerce as a means to facilitate entrepreneurial activities has been highlighted in the literature (Carrier et al., 2004). The use of e-commerce platforms has become increasingly common among entrepreneurs, enabling them to execute business operations more effectively. Taken together, these insights on the factors influencing EI and EA among young adults contribute to the development of a policy framework aimed at promoting new ventures and supporting entrepreneurs.

## **6.10 Conclusion of the Chapter**

In conclusion, the qualitative analysis revealed several key themes that include financing as a liability for new graduates, government involvement in entrepreneurship, acquiring entrepreneurial knowledge and, fear of failure with male and female participants, starting a business during COVID-19, and factors that lead to EI and EA. These themes shed light on the challenges and opportunities faced by recent graduates in Saudi Arabia regarding entrepreneurship. Firstly, accessing financing through traditional financial institutions poses challenges for new graduates, but alternative options such as support from family and self-funding offer potential solutions. However, gender-segregated norms and practices may influence access to financial services and bureaucratic offices for both men and women. Secondly, while the government provides support programs for entrepreneurship, bureaucratic hurdles and a lack of training hinder graduates from benefiting fully from these initiatives. Additionally, the absence of entrepreneurial education and training in Saudi business schools, along with the fear of failure, influences graduates' entrepreneurial knowledge and experience. Moreover, both men and women acknowledge the impact of fear of failure on their entrepreneurship aspirations. Furthermore, the COVID-19 pandemic has brought both challenges and opportunities for aspiring entrepreneurs. While some participants faced disruptions and financial difficulties, others benefited from increased demand in certain sectors. This highlights the importance of adaptability in entrepreneurial activities. Finally, various factors influence entrepreneurial intention and action, including market opportunities, positive attitudes towards business, and push factors such as a lack of job opportunities, especially during the pandemic.

## **Chapter Seven: Conclusion**

### **7.1 Introduction**

This study seeks to understand the gap between EI and EA among recent graduates in Saudi Arabia, aiming to identify obstacles hindering them from translating intentions into actions. Additionally, it aims to validate the TPB model in the Saudi context and examine whether recent graduates have pursued entrepreneurial actions after completing their studies. The findings typically revealed that a combination of personal factors, societal influences, and external circumstances affect recent Saudi graduates' entrepreneurial intentions and actions. The findings of quantitative data provided evidence showing the significance of the TPB model in understanding the link between EI and EA within the Saudi context. A significant association between EI and the TPB antecedents was found, and this suggests the importance of personal attitudes, subjective norms, and perceived behavioural control in influencing individuals' entrepreneurial activities. Also, the results of mediation showed that these TPB antecedents play a crucial role in mediating the relationship between SAS and EI. In addition to the quantitative findings, the qualitative analysis provided empirical evidence concerning the barriers that prevent young graduates from transitioning their intentions into entrepreneurial actions.

One major barrier identified was the challenge of securing financing, as financial institutions often impose strict requirements that new graduates find difficult to meet. However, alternative financing options such as support from family or self-funding offer potential solutions. Furthermore, the qualitative data reported the impact of government involvement in entrepreneurship through support programs. While these programmes aim to encourage entrepreneurship, bureaucratic hurdles and a lack of training often impede graduates from benefiting fully. Another significant barrier identified is the fear of failure, which affects both male and female participants. This fear can hold individuals back from pursuing entrepreneurial activities despite having intentions to do so. Moreover, the COVID-19 pandemic has introduced additional challenges and opportunities for young entrepreneurs. Some participants experienced disruptions and financial difficulties, while others capitalised on new market demands created by the pandemic.

The literature review in this thesis (Chapter Two) showed a research gap worth investigating, the methodology chapter (Chapter Three) identified that a sequential explanatory mixed-

methods approach combined with conducting a longitudinal study was the appropriate methodology that would help answer the research questions, achieve the research objectives, and extend the work of other researchers investigating the EI and EA gap (see Chapter One for the research questions and objectives). This chapter concludes the study by discussing the key research findings in relation to the research aims. It presents the value and contribution of the research, including theoretical and policy contributions. Finally, the chapter shows the research limitations and offers suggestions for future research.

As discussed in Chapter 2, there is a limited body of research that has examined the relationship between EI and EA. Also, the influence of social and societal factors in understanding both EI and its translation into actual actions necessitates further exploration of this topic. Rather than concentrating solely on psychological factors that may explain the gap between entrepreneurial intention and action (e.g., Gielnik et al., 2014; van Gelderen et al., 2015; van Gelderen et al., 2018), this study shifts its focus towards investigating the impact of social and societal elements on this transformation process. These elements include economic conditions, political influences, regulatory frameworks, the experiences of successful parent entrepreneurs, the prevailing entrepreneurial culture, entrepreneurship-related programs, and government support, all within the context of their connection to the EI-EA link.

In a meta-analysis of 98 EI studies, Schlaegel et al. (2014) have called for future research to investigate the role played by formal institutions in understanding entrepreneurship through laws, regulations, and policies, as well as the contributions of cultural norms and values in fostering entrepreneurial ventures. Additionally, Ozaralli et al. (2016) have similarly emphasised the necessity of understanding the diverse array of factors that influence EI within various contexts and cultural settings. They have pointed out that there remains limited comprehension regarding the environmental, social, and cultural aspects that facilitate early EIs. Additionally, studies examining this subject from a cross-cultural perspective and within social, cultural, and economic contexts beyond the Western countries are relatively scarce. The current research aims to respond to these calls for a better exploration of these aspects. Given the mixed-methods approach employed, it is also possible that other factors may emerge as significant themes during participant interviews. Thus, within the scope of this thesis, we aim to address several research questions, which are outlined below.

The current thesis examined three overarching research questions. The first research question aimed to explore the validity of the TPB model and its antecedents within the Saudi context. Through an analysis of the relationships between variables, this study sought to determine whether the TPB framework and its components hold in the unique socio-cultural environment of Saudi Arabia. The results pertaining to this research question present important evidence regarding the contributions of TPB components in predicting EI at varying degrees across different datasets. The second research question examined the longitudinal relationships between the transition from EI to EA among university students post-graduation. The study aimed to investigate whether students can transform their intentions into concrete business actions once they have completed their studies. The results obtained from this longitudinal study provided evidence supporting the notion that EI does not necessarily lead to EA among recent graduate students during the six months after finishing their studies. Lastly, the third research question focused on identifying the barriers that hinder graduating university students from translating their EI into EA. By exploring the factors that may inhibit the progression from intention to action, this study aimed to understand the specific challenges that young entrepreneurs face in Saudi Arabia. The results showed that the issue of financing, the involvement of the government in entrepreneurship, acquiring entrepreneurial knowledge and experience, the fear of failure for both male and female participants, and the unique context of the COVID-19 pandemic were found to affect the EI and subsequent EA among young individuals.

## **7.2 Key Research Findings**

This study aimed to investigate the EI and EA gap among the young population, with a focus on the SAS factors. It started by testing the validity of the TPB model in the recent Saudi university graduates. It is important to emphasize that this study was conducted within a relatively short timeline, which included the challenging context of both during and post-COVID-19 restrictions. This temporal dimension adds a unique contribution to the extant knowledge, as it captures the changes that occurred during and post-COVID-19 pandemic influencing individuals' entrepreneurship intentions and activities. Testing this model using both the quantitative and qualitative methods helped in understanding the link between EI and EA. The quantitative analysis indicated that all the TPB model antecedents (ATB, SN, and PBC) were correlated with EI and highly associated with EI (64% of the variance in EI), and the qualitative analysis findings provided further explanations and a better understanding

of this association. This was done by analysing the participant's interviews and interpreting the factors that led to the students' positive attitudes towards starting a business, such as the ease of e-commerce, which many participants mentioned. While the sample size was relatively small, it is worth noting that a subset of participants, who were business graduates and some of whom had established their own businesses, provided important information that held significant significance for research and practice. Additionally, the researcher was able to understand what might enhance the student's confidence and ability to start a business, such as available family support and government training programs.

Further quantitative findings obtained through the longitudinal approach showed that about 80% of those who had intended to take steps to start a business did not take any action during the six months after graduation. The qualitative analysis helped provide a deep understanding of the barriers that prevented those participants from acting, such as the lack of financing, communication, training, and experience alongside bureaucracy and anxiety about expensive penalties.

In addition, the quantitative findings suggested that the SAS factors were correlated with ATB, SN, PBC, and EA, and the qualitative data analysis helped in understanding the role of SAS factors in developing the participants' EI and in understanding the link between EI and EA. This was achieved by the participants explaining, for example, the role that the rules and regulations played in the link between EI and EA. Moreover, the quantitative findings suggested that EI during the COVID-19 pandemic was higher, and the qualitative data helped explain what role the pandemic did play in transforming EI into EA. All these findings, explanations, and understandings would not be available without taking the pragmatic philosophical position and applying the mixed-methods approach. This supported the researcher of this thesis to argue that applying the mixed-methods approach helps solve complex research problems, as Molina-Azorín (2016) suggested. It also helped the researcher to argue that results obtained from a mixed-methods study including cross-sectional, longitudinal, and interview approaches are more reliable and valid because each quantitative or qualitative method is used to make up for the shortcomings of the others, and they can provide stronger and better inferences and can be used to critically evaluate rival theories (Smith, 2019).

### 7.3 Theoretical Implications

Generally, this research study's findings add to knowledge about the early entrepreneurial processes that start with EI (GEM, 2018). The researcher studied the link between EI and EA among the young population in one of the developing countries, which fills the existing gap in the literature. The research findings contribute to the TPB model as the findings suggest that the model is valid and can be applied in the Saudi context and that the three TPB antecedents were highly correlated with EI in both samples, the 2020 sample and the 2021 sample. Another important contribution to the theory is the use of both quantitative and qualitative methods, which helped provide further explanation regarding how this strong association works. Furthermore, the findings that SAS factors were related to the TPB model and that ATB, SN, and PBC mediate the relationship between SAS factors and EI contribute to the TPB model. Based on the results, the SAS variable can be added as a new antecedent to the model besides ATB, SN, and PBC. This suggests that SAS has the potential to directly motivate individuals to initiate entrepreneurial activities, underscoring the need to consider a broader spectrum of factors beyond individual beliefs and attitudes in understanding entrepreneurial intention. The SAS also exhibited an indirect impact on EI mediated by ATB, SN, and PBC. This implies that elevated levels of SAS are associated with increased levels of ATB, SN, and PBC, thereby these heightened levels of ATB, SN, and PBC subsequently contribute to a greater level of EI. Hence, future researchers can add and test the SAS scale that was created and validated by the researcher in this thesis.

One important feature of this study is the introduction of the SAS measure, which constitutes a novel contribution to the relevant field. While measures such as attitude towards behaviour subjective norms, perceived behavioural control, and entrepreneurial intention in the model of TPB are well-established in the literature, the SAS scale was developed specifically for this study. Given the absence of an existing SAS scale in prior research, its creation was imperative to better examine the relationships between SAS antecedents and the existing variables. To ensure its validity, an extensive process was undertaken in constructing and validating the SAS scale. This included rigorous item development, factor analysis to establish its factor structure, and subsequent analysis to assess its reliability and validity. The results showed that SAS has good evidence of reliability and validity. As such, the SAS scale represents a significant addition to the study, contributing not only to a better understanding of its construct but also offering potential applications in related research contexts.



Moreover, these research findings will add to studies that focus on the link between Hofstede's cultural dimensions and entrepreneurship as the researcher used these dimensions to better understand and explain the link between the cultural, social, and societal factors and EI and EA (Shinnar et al., 2012; Urb & Ratsimanetrimanana, 2015). In addition, researchers in the literature called for studying the link between EI and EA by using a longitudinal approach, and this thesis responded to these calls and added to knowledge about this link (Anwar et al. 2021; Küttim et al., 2014; Vamvaka et al., 2020). Specifically, the finding that a high number of recent graduates did not take any steps to start a business even though they had intended to do so six months before graduating adds to the current literature.

Finally, the finding that the level of EI was higher during the COVID-19 restrictions compared with after these restrictions were lifted adds to the current literature investigating whether COVID-19 and similar economic crises encourage or discourage entrepreneurial activities. This result contributes to the current body of knowledge on whether the COVID-19 crisis acts as an opportunity or inhibitive factor for entrepreneurial activities. The unprecedented challenges posed by the COVID-19 pandemic led to many challenges to the resilience and adaptability of entrepreneurial activities in the face of adversity. By noting that EI showed an increase during the restriction period, this study suggests a potential for individuals to perceive entrepreneurship as a sustainable response to economic uncertainties. The elevated level of EI observed during the COVID-19 restrictions could be attributed to various factors. First, economic downturns can motivate individuals to explore alternative avenues of income generation, with entrepreneurship presenting itself as a sustainable option. Second, the restrictions imposed by the pandemic on traditional employment opportunities may have prompted individuals to consider entrepreneurial paths as a means of financial stability. Furthermore, the COVID-19 pandemic might have shifted perceptions about risk, encouraging individuals to move into entrepreneurship as a response to the uncertainty.

#### **7.4 Practical Implications**

The findings of this study have important implications for the practice. These practical implications identify actions that could create a more supportive environment for entrepreneurship among recent graduates in Saudi Arabia. Concerning the quantitative data, firstly, we found a significant positive association between EI and TPB antecedents. These results suggest the importance of ATB, SN, PBC and SAS in influencing EI. We also found

that ATB, SN, and PBC significantly mediated the relationship between SAS and EI. This implies that individuals with higher levels of SAS are more likely to exhibit higher levels of ATB, SN, and PBC, subsequently leading to increased EI. Educators and policymakers can take this understanding to design interventions that promote positive attitudes toward entrepreneurship and provide support in developing the necessary skills and confidence, which contribute to the EI.

Policymakers and educators can do this by developing and introducing a curriculum framework like this

1. Include entrepreneurial instruction at all curriculum levels, ranging from primary to higher education
2. Give students practical learning opportunities to apply theoretical concepts in real-world scenarios, such as entrepreneurial initiatives, contests, and simulations.
3. Ask mentors, industry insiders, and prosperous business owners to talk to students about their struggles, successes, and lessons learned.
4. Provide training courses, seminars, and workshops aimed at fostering the development of particular entrepreneurial competencies like marketing, finance, leadership, networking, and business planning.
5. Promote cross-disciplinary cooperation by combining the study of entrepreneurship with the arts, humanities, social sciences, and STEM (science, technology, engineering, and mathematics) fields.
6. Create networks of support and mentorship that link students to seasoned business owners, graduates, business leaders, and investors.
7. Help student entrepreneurs get access to facilities, resources, and funding opportunities.
8. Honor and incentivize entrepreneurial endeavors and accomplishments with grants, scholarships, and awards.

Concerning the qualitative findings, the identified barriers, particularly the challenge of securing financing, highlight the need for tailored financial support mechanisms for young graduates to establish their businesses with high EI. Financial institutions could explore flexible lending criteria or offer targeted financial assistance programs to facilitate access to capital for new graduates. Additionally, promoting awareness of alternative financing options, such as support from family or self-funding, can empower graduates to pursue entrepreneurial activities. Government support aimed at promoting entrepreneurship should

address bureaucratic obstacles and provide training and resources to new graduates in Saudi Arabia. The Saudi government can foster entrepreneurship, enable recent graduates to pursue their business goals and stimulate economic growth and job creation in the nation by putting policies like addressing bureaucratic obstacles, offering training programs, allocating government grants, establishing support networks, and encouraging collaboration and innovation into practice. Simplifying administrative processes and providing targeted training programs can enhance the effectiveness of these support programs and increase their accessibility to young entrepreneurs. Efforts to mitigate the fear of failure, a significant barrier identified in the study, should also be prioritized. To reduce the fear of failing, which is a major obstacle to entrepreneurship, proactive steps must be taken to encourage risk-taking, resilience, and an optimistic outlook in those who aspire to become entrepreneurs. Entrepreneurship education programs can incorporate modules on risk-taking and resilience-building to help individuals overcome their fear of failure. Peer support networks and mentorship programs can also provide encouragement and guidance to young entrepreneurs.

The COVID-19 pandemic has presented both challenges and opportunities for young entrepreneurs. Support organisations and policymakers should provide assistance tailored to the unique needs of entrepreneurs affected by the COVID-19 pandemic and possible future pandemics, such as financial relief programs, access to online resources, and mentorship opportunities. That's accurate, yes. Essentially, by contemplating the experiences and results of interventions carried out amid the COVID-19 epidemic, policymakers and support groups can obtain important knowledge about the particular requirements and difficulties encountered by business owners in times of emergency. This knowledge can help design more specialised and efficient support programs that meet these needs, strengthening recovery and resilience efforts in the event of pandemics or other comparable disruptions in the future. Additionally, fostering innovation and creativity to address emerging market demands can help entrepreneurs capitalise on new opportunities arising from the pandemic.

## **7.5 Policy Contribution**

### **7.5.1 Importance of TPB model in relation to EI**

The findings in this thesis provide policy contributions and recommendations to policymakers in the Saudi context and similar contexts. First, as the results in Chapter Four (see Table 4.7) provide evidence that the TPB, SN, and PBC are highly important and

associated with EI, policymakers in Saudi Arabia should continue promoting entrepreneurship among the young population to enhance their positive attitudes towards starting a business, the positive support from their families and friends, and the level of confidence among young and potential entrepreneurs. This would eventually help in developing EIs among young Saudis. To achieve this strategy, the Saudi government needs to continue improving the conditions of the entrepreneurship environment. The government has already started working hard to improve the country's entrepreneurship ecosystem (Aloulou et al., 2021). Entrepreneurship ecosystem factors are used by governments, international organisations, and research scholars to assess the entrepreneurial conditions in a country (Ali et al., 2019). A nationally representative sample of experts is used in the GEM study to undertake an annual assessment of the national conditions for entrepreneurship in Saudi Arabia. This survey focuses on the environmental factors that GEM believes best capture the environment in which entrepreneurs operate. These factors, according to the GEM report, are access to finances, access to physical infrastructure, government policies and regulations for new and growing firms, government support for new and growing firms, entrepreneurship education and training, and social and cultural factors (GEM, 2022).

As far as culture is concerned, culture can serve an important role in entrepreneurial activities. As per George and Zahra (2002), culture plays a significant role in affecting individuals' inclinations toward creativity, innovation, and risk-taking, influenced by the shared beliefs and values within a society. Ali et al. (2019) also emphasize that Saudi traditions and cultural norms may prevent female students from contemplating or expressing interest in entrepreneurial activities. Understanding the associations between national culture and SAS in individuals' decisions to pursue entrepreneurship provides crucial evidence for the focus of this study. Additionally, the researchers postulated that a supportive cultural environment triggering entrepreneurship could impact students' EI.

By recognising the importance of personal attitudes, subjective norms, perceived behavioural control, and social and societal factors in the TPB model in influencing EI, policymakers and educators can put efforts towards Saudi Vision 2030's goals of promoting a culture of entrepreneurship. Encouraging positive attitudes towards entrepreneurship and providing support in developing essential skills are consistent with this vision for fostering an entrepreneurial ecosystem.

### **7.5.2 Lack of access to finances for new graduates**

The GEM findings (2022) indicate that lack of access to finances is inhibiting new Saudi entrepreneurs from starting up their businesses. Similar to these results, the results of the qualitative analysis in this thesis suggested that access to finances is one of the most significant barriers that prevented young participants from taking steps to start their businesses. Hence, to bridge the EI and EA gap that exists among young Saudis based on the longitudinal findings in this thesis, policymakers in Saudi Arabia must facilitate access to finances among young Saudis. People between the ages of 18 and 24 are typically either in college or gaining their first job experience, making them less likely to establish their firms. However, the results of the recent GEM report indicate that this age group has a high rate of entrepreneurship (GEM, 2022). Young Saudis who are aged 25 and younger represent 54% of the total Saudi population according to recent data generated by the General Authority of Statistics in Saudi Arabia (GASTAT, 2022). Therefore, sufficient financing opportunities available for this group would help the young Saudis to establish businesses, which would help foster the Saudi economy in the coming years.

### **7.5.3 Government involvement in entrepreneurship**

Recently, the Saudi government realised the issue of financing, and policymakers started to facilitate access to government financing support for new entrepreneurs by establishing the Small and Medium Enterprises Bank in 2021. This initiative seeks to increase the financing given to the small and medium-sized business sector, close the financing gap, strengthen the contributions of financial institutions in providing innovative financing solutions, and achieve financial stability for this crucial sector (the National Development Bank, 2023). However, it seems that this bank provides financial support only to those who have already started businesses and can show potential for business growth in the future. Hence, young entrepreneurs who have promising business ideas and are willing to start a business would not benefit from this initiative. Consequently, they might give up on their EI and transform their business ideas into real business. Young people in this age range have three ways of financing their businesses when they are in the seed financing stage: through their families and friends who believe in their business ideas, as the qualitative data findings in this thesis suggest, or through venture capital and business angels who also require evidence of potential business growth (e.g. a healthy financial statement) (Bernardino et al., 2020).

To solve the problem of lack of financing among the young population who have promising business ideas, the Saudi government should support financial institutions that specialise in a crowdfunding approach. Crowdfunding, which differs from conventional offline forms of financing (such as banks, business angels, and others), is the ideal business model or technique to employ to attract funds in an online environment. One of the main reasons for entrepreneurs to start a crowdfunding campaign is difficulty in finding funding for their project, as traditional sources of funding (such as their savings, loans from family and friends, business angels, or venture capital) have not been able to meet their needs. Due to the financial deficit that start-ups frequently experience, the increased capital diversification, and the multiplicity of financing sources, crowdfunding may be especially helpful for young entrepreneurs at the beginning of new enterprises (Bernardino et al., 2020). Therefore, policymakers in Saudi Arabia must improve the crowdfunding ecosystem to bridge the EI and EA gap among young Saudis.

According to Gazzaz (2019), there are only two authorised crowdfunding platforms in Saudi Arabia (Manafa and Scopeer). More crowdfunding platforms should be established in the coming years to help young people 'pitch' their business ideas to online investors and gain investor funding. A successful example of a crowdfunding ecosystem that helps young entrepreneurs start their businesses is located in the United Kingdom. A recent comprehensive survey found that over half (45%) of all UK angel investors made investments through equity crowdfunding platforms (Brown et al., 2020). Brown et al. (2020) explain that investors are becoming more accustomed to the online 'video pitches' that entrepreneurs use to solicit equity capital via crowdfunding platforms, which may lessen the necessity for investors and entrepreneurs to personally interact during situations such as the COVID-19 pandemic. It is important to note that the suitability of online 'video pitches' as an investment solicitation method during situations like the COVID-19 pandemic should not inherently differ based on the gender of the entrepreneur. Both women and men can effectively utilise this approach to present their business ideas and seek equity capital through crowdfunding platforms. The key factors for success would likely revolve around the quality of the pitch, the business idea itself, and the ability to engage potential investors, rather than the gender of the entrepreneur. However, it is essential to consider that various factors, such as societal norms, potential biases, and access to resources can impact the experiences of women entrepreneurs compared to men in the context of Saudi Arabia. Thus, while the

method itself may be equally suitable, women entrepreneurs may face additional challenges that need to be addressed to ensure equal opportunities and success in crowdfunding platforms. According to the data in Brown et al.'s (2020) study, seed financing, which is often provided to start-up businesses at an early stage, is by far the most common type of entrepreneurial financing in the UK. This type of financing accounts for almost three-quarters of all equity finance transactions in the UK in most years. Therefore, to bridge the EI and EA gap, policymakers in Saudi Arabia should develop a crowdfunding ecosystem similar to the one developed in the United Kingdom. This reasoning is based on the idea that successful models from one country can be adapted and applied in another country with careful consideration of contextual factors. Here are the reasons why this system might be considered applicable to Saudi Arabia. Saudi Arabia has a growing entrepreneurial ecosystem and a young population. Crowdfunding is a new financing model that can be flexibly adapted to various contexts and industries, as it often appeals to innovative startups and young individuals seeking alternative funding sources. Crowdfunding platforms can facilitate access to a global network of investors (Troise et al., 2023). Saudi entrepreneurs could potentially attract international support for their businesses, which can be beneficial for scaling up businesses and gaining exposure to global markets.

However, the ease of access to finances through crowdfunding and other financing channels is not enough to bridge the EI and EA gap identified in this thesis. Policymakers in Saudi Arabia should also encourage universities to work on developing their students' entrepreneurial skills to enhance the students' confidence level. The qualitative data in Chapter Six shows that there is a lack of entrepreneurship education and training among business students, and the recent GEM study agrees that there is a problem in entrepreneurship education and training (GEM, 2022). Therefore, policymakers in the Ministry of Education should work closely with university leaders to provide elective entrepreneurship training programs for those who are interested in taking such training programs. These programs should include, for example, developing the student's skills in communication, being able to sell both themselves and their ideas or products or services, being able to develop solid business plans, and feasibility studies. In addition, based on the qualitative findings in this thesis, the practical element of running a business seems to be missing from business school education. Therefore, it would be more beneficial for business schools to integrate additional practical training into their curriculum. For instance, inviting entrepreneurs to engage with students within the classroom setting and provide their insights

and experiences on initiating a business could be highly advantageous, especially when potential entrepreneurs are taking their initial steps toward EA.

To achieve the goals of Saudi Vision 2030 about diversifying the economy and reducing dependence on oil, it is important to address the financing challenges faced by young entrepreneurs, especially recent graduates. Tailored financial support mechanisms, including flexible lending criteria and targeted financial assistance programs, can help young entrepreneurs in terms of accessing capital and launching their businesses, thus contributing to economic diversification.

#### **7.5.4 Acquiring entrepreneurial knowledge and experience and fear of failure with male and female participants**

More focused education for business students and graduates is indeed a crucial recommendation of this study. In the education context, providing targeted training and guidance on both practical and theoretical aspects of starting and running a business, including understanding potential penalties and legal requirements, can significantly enhance their preparedness, intention, and confidence to undertake entrepreneurial actions. This educational training could be provided in the form of workshops, seminars, or courses that cover technical and practical requirements of the business as well as legal and regulatory aspects of business operations, helping entrepreneurs navigate potential challenges and obstacles more effectively without fear of failure. In this regard, Saudi universities should work with the Ministry of Education and the Ministry of Finance to encourage financial institutions to provide financing program support for young people who have promising business ideas and who have enrolled in and completed an entrepreneurship training program.

Investing in entrepreneurship education programs and practical training initiatives can support young Saudis with the knowledge and skills needed to succeed as entrepreneurs. By presenting hands-on learning experiences, mentorship programs, and access to entrepreneurial networks, Saudi Vision 2030's goal of fostering innovation-driven entrepreneurship can be achieved, driving economic growth and creating job opportunities for Saudi youth. Also, overcoming the fear of failure is essential for fostering an entrepreneurial mindset among young Saudi entrepreneurs, particularly those who recently graduated from universities. Entrepreneurship education programs that incorporate modules on risk-taking



and resilience-building can help individuals pursue entrepreneurial activities with confidence, contributing to Saudi Vision 2030's goal of nurturing a skilled and competitive workforce.

#### **7.5.5 Starting a business during COVID-19 and factors that lead to EI and EA**

Considering the context of change, including the impact of the COVID-19 pandemic and ongoing reforms in various sectors in Saudi Arabia, it becomes even more crucial for policymakers to re-evaluate and ease the rules and regulations related to entrepreneurship. The challenges highlighted by young students in interviews, such as bureaucratic hurdles and the possibility of having to pay high violation penalties are barriers that can discourage entrepreneurs, especially during times of economic uncertainty like the COVID-19 pandemic. Therefore, amidst these changes, policymakers should aim to create a more positive environment for entrepreneurship by simplifying administrative procedures and adopting equitable penalty systems. This would not only encourage compliance but also promote innovation and risk-taking among young entrepreneurs, contributing to economic resilience and growth, including in times of crisis like the COVID-19 pandemic. The entrepreneurship experts who participated in the GEM study agreed and identified factors that might be detrimental to entrepreneurship and business activity, such as higher taxes and fees. Although violating the rules is not acceptable, and penalties for violation are one of the solutions, it seems that the amount of money entrepreneurs have to pay when they do violate the rules is relatively high, according to the qualitative findings in this thesis. Some new entrepreneurs are inexperienced and can violate the rules without knowing. Having to pay such high penalties would destroy their businesses. It could also put new entrepreneurs off starting businesses because they are afraid of paying these penalties. Formal warnings could be an initial response when violations occur. Then, penalties could be issued if the entrepreneurs do not listen. All of these recommendations can help to bridge the gap between EI and EA among the young population.

In terms of health crises like the COVID-19 pandemic have provided us with the importance of resilience and adaptability in entrepreneurship. The COVID-19 pandemic not only presented challenges related to the outbreak but also highlighted broader factors influencing entrepreneurship, such as digital transformation, remote work, and government support. These challenges highlighted the importance of resilience and adaptability in responding to sudden shocks like health crises, natural disasters, or economic downturns. The pandemic

also provided lessons for future preparedness and resilience-building efforts, as entrepreneurs who demonstrated resilience can serve as role models. Policymakers can use these insights to support entrepreneurship and foster economic resilience, such as improving access to financial resources, enhancing digital infrastructure, and investing in education and training programs. Supporting entrepreneurs affected by the COVID-19 pandemic and possible similar future pandemics through financial relief programs, access to online resources, and mentorship opportunities are consistent with Saudi Vision 2030 in terms of building a sustainable economy for everyone including young entrepreneurs and a diversified economy resilient to external shocks. To achieve the goals of Saudi Vision 2030, it is also important to consider how personal factors, societal influences, and external circumstances affect entrepreneurial intentions and actions.

## **7.6 Limitations**

Although this study has value and provides contributions, the study is not free of limitations. The first limitation is related to the issue of generalisability. It is not possible to generalise the results to all business students or business graduates in Saudi Arabia as the sample was skewed (e.g., geographical bias, cultural and socioeconomic bias, and educational bias) towards students from the western and central regions of Saudi Arabia (Riyadh and Jeddah). The sample also represents those studying at public universities (free education). Hence, the sample does not represent those studying at private universities in Saudi Arabia. There is also a chance that those who participated in the surveys were students interested in entrepreneurship. If this is the case, then generalising the results to all business students would be changed a little bit because the levels of EI and EA would represent only those interested in entrepreneurship.

Another limitation is related to the research sample size obtained in the second phase of collecting the data (six months after graduating). The number of participants who participated in the second wave was only 82 in 2020 and 42 in 2021, which may present a little bit of change results with generalisability but due to COVID it was hardly collected. The researcher had planned to collect a higher number of participants to avoid the problem of attrition; however, the COVID-19 conditions prevented the researcher from traveling and collecting the desired sample size.

Additionally, a limitation of this study pertains to the geographical distribution of participants. The study primarily included students from universities in Saudi Arabia, and importantly, a significant majority (65%) of these participants were enrolled in universities located in the western region of the country. This concentration of participants in the western region raises a concern regarding the generalisability of the findings, as they may not fully represent the perspectives and experiences of students from other regions.

Furthermore, it is important to acknowledge that the variables in this study were evaluated through self-reported measures. This approach might introduce biases influenced by factors like impression management (e.g., overestimation and underestimation of responses) and introspective difficulties, as individuals may unconsciously change their responses or find it challenging to accurately self-assess. By implementing the following tactics, researchers can reduce biases and boost confidence in the interpretation of results by improving the rigor and validity of studies using self-reported measures.

1. Social desirability bias and impression management concerns can be lessened by ensuring anonymity and secrecy in data collection processes (Tourangeau & Yan, 2007).
2. To determine the validity and reliability of the self-reported measures, researchers may perform psychometric assessments of them before data collection (DeVellis, 2017).
3. For example, they can incorporate validity checks, such as attentiveness tests or reverse-coded items, to find participants who might be answering erratically or carelessly (Meade & Craig, 2012).

Another limitation of this study is its reliance on a cross-sectional research design when conducting mediation analysis to test the mediating roles of ATB, SN, and PBC in the relationship between SAS and EI. Although cross-sectional studies are valuable for capturing a snapshot of relationships between variables at a single point in time (Hua et al., 2008), they cannot establish causal relationships and infer the direction of effects between variables. In this study, while the researcher was able to identify significant associations between SAS, EI, ATB, SN, and PBC and mediating roles of ATB, SN, and PBC between SAS and EI, he cannot definitively conclude the order of causality. For example, we cannot conclude that SAS causes increased levels of ATB, SN, and PBC, which in turn causes elevated levels of EI and vice versa. This is particularly important in understanding how SAS evolved into EI over time, a process that is dynamic and subject to numerous influences.

Last but not least, being a male researcher engaged in mixed-methodology research, especially within the context of Saudi Arabia, warrants a detailed discussion. It is important to acknowledge that the gender of the researcher in this study may have posed certain limitations, particularly concerning interactions with Saudi women participants. Gender dynamics and cultural norms can influence research interactions, potentially affecting participants' willingness to engage openly and sincerely. In Saudi Arabia, where gender segregation and conservative social norms are prevalent, Saudi women may feel more comfortable discussing sensitive topics with female researchers or in gender-segregated settings (Cassell & Blake, 2012).

### **7.7 Future Research**

Subsequent researchers need to address several considerations. First, due to the issue of generalisability of the findings related to the sample, future researchers are advised to avoid including the word entrepreneurship in the survey topic. Wording such as “a study about students’ plans” would be better than using “an entrepreneurship study”. This would help to include those who are not interested in entrepreneurship.

Second, to address the limitation concerning the sample size, future researchers who are planning to use a longitudinal approach should collect a large sample size in the first wave and should keep in mind that the majority of participants will not be willing to participate in the second wave of data collection. Furthermore, subsequent researchers who have adequate resources and time are advised to incorporate multiple phases of data collection into their longitudinal studies. To elaborate on this point, instead of restricting the follow-up survey to a single time lag of six months, it may be beneficial for future researchers to consider more extended follow-up intervals. For instance, researchers could implement follow-up surveys after six months and then conduct additional assessments after one year. This extended timeframe would enable a more comprehensive examination of whether participants transition from EI to EA as time progresses. Also, researchers can investigate whether participants take EA when they have had more time to plan and initiate entrepreneurial activities.

Third, despite using multi-methods such as cross-sectional, longitudinal studies, and interviews in this thesis, there are still several avenues for future research to explore the

research idea of this study. Researchers are strongly encouraged to examine the impact of significant disruptive events, like the COVID-19 pandemic or recent crises such as the severe earthquake in Turkey, which have had devastating impacts on various aspects of life (Yıldırım, 2023). Investigating how these extraordinary circumstances influence the levels of EI can provide useful evidence on individuals' EI and EA in the face of adversity.

Fourth, to address the limitation related to the geographical distribution of participants, for future research, it is advisable to enhance the diversity of the participant pool by including students from universities in other regions of Saudi Arabia. Hence, future researchers should collect data from the east, west, north, south, and middle of the chosen context. This broader representation would allow for a better understanding of the study variables and facilitate the extrapolation of results to a wider national or cross-cultural context.

Furthermore, future researchers should extend the scope of their study by employing the longitudinal mixed-methods approach across diverse samples. It is related to the use of a longitudinal design to advocate using a longitudinal mixed-methods strategy across varied populations. However it adds another level of complexity by recommending the use of mixed methodologies, which combine quantitative and qualitative data collecting and analysis strategies. Researchers in the future will be able to obtain a more thorough understanding of the processes and factors impacting entrepreneurial intentions and activities over time by combining a mixed-methods approach, a longitudinal design, and a diverse sample. The validity and depth of the research findings are increased by this comprehensive approach, which enables both quantitative analysis of trends and qualitative investigation of underlying mechanisms. These could include master's students, individuals enrolled in private universities, and employees working in both the private and public sectors. Exploring EI within these different demographic groups can offer a better understanding of how EI changes over time and under varying circumstances, providing evidence of the factors that drive or hinder the transition to EA. Such multifaceted research approaches hold the potential to present robust evidence and contribute to a better comprehension of entrepreneurial activities.

Fifth, to mitigate concerning the potential issues of self-report measures, future studies could benefit from incorporating implicit measures for the variables used in this study. Implicit measures can provide a more objective and unbiased assessment by tapping into automatic

cognitive processes rather than relying solely on self-reported responses, thus enhancing the overall robustness of the research findings (Gawronski & De Houwer, 2014; Gawronski & Hahn, 2018).

Sixth, The longitudinal studies involve the repeated measurement of variables over an extended period, allowing researchers to track individuals or groups and observe changes and developments in their entrepreneurial intentions and actions over time. By doing so, researchers can gain a better understanding of the causal effects and temporal sequence of these relationships, providing more robust evidence about the processes of entrepreneurship among young adults. Longitudinal studies would offer more precise evidence through which to examine how factors such as social and societal influences impact the transition from entrepreneurial intention to action.

Finally, being a male researcher can carry a limitation in this study and I recognise this potential limitation to be addressed in future research. One way to mitigate this concern was to be reflexive and culturally sensitive throughout the research process. Reflexivity involves continuous self-awareness and critical reflection on how one's background, experiences, and identity may influence the research process and findings (Etherington, 2004). While I could not change my gender, I could actively respond to potential challenges. For instance, I was conscious of the potential discomfort that some female participants might feel during face-to-face interviews. To address this, I offered participants the choice of conducting interviews in settings where they felt most comfortable, even if it meant turning off the camera or using audio-only communication. This flexibility aimed to empower participants to engage in the research process in a way that respected their preferences and cultural norms. Additionally, I considered the issue of university access, which could have implications for the diversity of participants in the study. While access to participants from my university was relatively straightforward, securing access to students from other regional universities required additional permissions and authorisations, often involving Saudi Arabia's specific regulatory processes. This limitation influenced the composition of the study sample and was acknowledged as a potential source of bias.

## **7.8 Conclusion**

The research design and the applied methodological approach helped in answering the research questions and achieving the research objectives that were presented in Chapter One. Although the study findings have helped to identify some of the factors that may explain the EI and EA gap among the young population, bridging this gap requires further investigation through cooperation between a team of researchers who are experts in the use of longitudinal and mixed-methods approaches. As the studies of EI alone have been given extra attention by the leaders of large projects such as the GEM and GUESS, studies of the EI and EA gap deserve similar attention and further investigation. However, as investigating this gap involves multiple phases and potentially a mixed-methods approach, it requires sufficient time and adequate resources. The hope after reading through research is that the issue of the EI and EA gap will be adopted by large entrepreneurship projects or university research departments, as bridging this gap is important to improve the current economic conditions, especially after the crisis of the COVID-19 pandemic.

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## Appendices

### Appendix 1

#### Information about The Project

##### **Investigating the Entrepreneurial Intentions and Action gap in the Saudi Context**

The growing numbers of students are unlikely to find employment in the public and private sectors, which makes entrepreneurship and investigation into how to support students who want to be entrepreneurs vital for the future development of Saudi Arabia. According to the Saudi Arabian Monetary Agency (SAMA, 2018), unemployed youth comprise 12.7% of the Saudi population (6.7% for Saudi males and 32.5% for Saudi females). Two hundred fifty-four thousand Saudis graduate from university every year (135,000 females and 118,000 males) (SAMA, 2018); in 2019, the number of job seekers in Saudi Arabia was about 1.2 million (GASTAT, 2020).

The problem is that neither the public sector nor large companies in the Saudi market will be able to provide employment for all Saudi graduates in the coming years. Also, Saudi graduates could not replace all non- Saudi employees since most of these employments are low-wage employment such as working on constructions. The Annual Saudi government revenues in 2018 amounted to approximately 905 billion Saudi riyals (\$241 billion), while expenditures were about 1,079 billion riyals (\$288 billion). Approximately 45% of these expenditures are compensations and salaries for Saudi government employees (SAMA, 2018). As a result of this deficit in the Saudi budget, and the government's plan to focus on increasing capital expenditure spending instead of operating expenditure (2030 Vision report, 2016), the Saudi government will be unable to afford the hiring of more graduates. Also, since large and medium companies face many economic challenges—such as new rules and regulations, including a new Saudi tax system and the global pandemic situation (Coronavirus, COVID-19)—they will not be able to hire all of these graduates.

The “Saudi Arabian oil” report conducted by McKinsey and Company (2015) noted that, as the population of Saudi Arabia is increasing, by 2030 the country will need to have significantly improved its economic growth to create six million jobs for the youth population. To address this issue, the Saudi government decided to focus on supporting existing SMEs and promoting innovation and entrepreneurship among youth. This would result in an increased number of SMEs, which would help to create new job opportunities and thus lower the unemployment rate (2030 vision report, 2016).

According to the General Authority for Statistics GASTAT (2018), as of 2018, about 12 million people (58% of the Saudi population) were under 30 years old. The Saudi government believes that young Saudis are ambitious and willing to better the Saudi economy. Crown Prince Mohammed ben Salman stated that “our real wealth lies in the ambition of our people and the potential of our younger generation” (2030 Vision report, p.7). Therefore, promoting entrepreneurship and SMEs creation among young people would help to create more job opportunities for them.

The Global Entrepreneurship Monitor (GEM) team surveyed the adult Saudi population (ages 18-64) to determine Total Early-Stage Entrepreneurship Activity (TEA). TEA includes nascent entrepreneurs (including those in the process of setting up a business and those who have started a business in the past three months) and new business owners (from 3 months to

3.5 years). The results of the survey, for which the sample comprised about 4,000 adults, show that only 5% of the Saudi population had started and run their businesses for less than 3 months, while 7% had been running their businesses for more than 3 months and less than 3.5 years. This finding demonstrates that such activity remains low (12%) compared to other Arab countries, such as Sudan (23%) and Lebanon (24%).

The GEM report also shows that 33% of the Saudi population intended to start a new business in the next three years, while 76% of the Saudi population think that there will be good opportunities within the next six months to start up a business in their communities.

These findings suggest that Saudi Arabia is an attractive market for new entrepreneurs and that a large number of Saudis intend to start up a business. Furthermore, the GEM results indicate that 78% of the Saudi population think that new, successful business owners enjoy a high level of social status and respect. In addition, although Saudis were found to have high levels of confidence and self-esteem (83% of the Saudi population) (GEM, 2018), entrepreneurial activities are still low when compared to the level of entrepreneurial intentions.

This research will seek to find the reasons for the gap between entrepreneurial intentions and action in the Saudi Arabian Context. The researcher intends to bridge this gap by identifying those obstacles that are preventing young Saudis from transforming their entrepreneurial intentions into actions. The study findings would help Saudi Arabian policy makers decide how to close this gap between entrepreneurial intentions and subsequent entrepreneurial behaviours.

The researcher plans to concentrate on the social and societal factors that may help or hinder the transformation of intention into action, such as the role of the economy, politics, rules and regulations, successful parent entrepreneurs, entrepreneurship culture, entrepreneurship programs, and government support as they relate to the link between entrepreneurial intentions and action.

The research sample will comprise university students who are studying in their final term at Saudi universities. These students, both female and male, are studying in one of the ten departments: Business Administration, Marketing, Finance, Human Resources Management, Public Administration, Accounting, Political Science, Economy, Management Information System, and Health Services Administration.

Many recent studies have called for an investigation of the intention and action gap. This research will answer these calls. For example, in their meta-analysis of EI 98 studies, Schlaegel et al. (2014) found that only a limited number of studies have investigated the impact of entrepreneurial intentions on entrepreneurial behaviour.

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## دراسة نوايا ريادة الأعمال وفجوة تطبيقها في المملكة العربية السعودية

من غير المرجح أن تجد الأعداد المتزايدة من خريجي الجامعات فرص عمل في القطاعين العام والخاص، مما يجعل ريادة الأعمال والتحقيق في كيفية دعم الطلاب والطالبات الذين يريدون أن يكونوا رواد أعمال في المستقبل أمرًا حيويًا للتنمية المستقبلية في المملكة العربية السعودية. وفقًا لبيانات مؤسسة النقد العربي السعودي، فإن نسبة البطالة بين الشباب والشابات تشكل 12.7% من السكان السعوديين (6.7% للذكور السعوديين و32.5% للإناث السعوديات). وحسب بيانات مؤسسة النقد العربي السعودي، في كل عام يتخرج ما يقارب مائتان وأربعة وخمسون ألف طالب وطالبة من الجامعات السعودية (135000 إناث و118000 ذكور)، وحسب بيانات الهيئة العامة للإحصاء، بلغ عدد السعوديين والسعوديات الباحثين عن عمل في عام 2019 حوالي 1.2 مليون.

المشكلة تكمن في عدم قدرة القطاع العام والشركات الكبيرة في القطاع الخاص على توفير فرص عمل لجميع الخريجين والخريجات السعوديين في السنوات القادمة. كما أنه يصعب على الخريجين السعوديين أن يحلوا محل جميع الموظفين غير السعوديين لأن عدد كبير من هذه الوظائف هي وظائف بأجور منخفضة مثل العمل في البناء والسباكة وغيره. وحسب بيانات مؤسسة النقد العربي السعودي، بلغت الإيرادات السنوية للمملكة في عام 2018 حوالي 905 مليار ريال سعودي (241 مليار دولار)، في حين بلغت النفقات حوالي 1,079 مليار ريال (288 مليار دولار). حوالي 45% من هذه النفقات هي رواتب ومكافآت لموظفي الدولة. نتيجة لهذا العجز في الميزانية السعودية، وتوجه المملكة للتركيز في زيادة الإنفاق الرأسمالي بدلاً من الإنفاق التشغيلي، سوف يكون من الصعب توظيف المزيد من خريجين وخريجات الجامعات في القطاع الحكومي. وأيضاً سوف يصعب على الشركات الكبيرة والمتوسطة توظيف جميع هؤلاء الخريجين والخريجات نظراً للعديد من التحديات الاقتصادية مثل الوضع العالمي السائد نتيجة لجائحة كورونا التي قد تحد من توظيف جميع هؤلاء الخريجين والخريجات في المستقبل.

أشار تقرير "النفط السعودي" الذي أجرته شركة ماكينزي وشركاه لعام 2015 إلى أنه مع تزايد عدد السكان في المملكة العربية السعودية، ستحتاج المملكة بحلول عام 2030 إلى تحسين نموها الاقتصادي بشكل كبير لخلق ستة ملايين فرصة عمل للشباب والشابات السعوديين. ولمعالجة هذه القضية، قررت الحكومة السعودية التركيز على دعم الشركات الصغيرة والمتوسطة القائمة وتشجيع الابتكار وريادة الأعمال بين فئة الشباب. سيؤدي هذا بمشيئة الله إلى زيادة عدد الشركات الصغيرة والمتوسطة، مما سيساعد على خلق فرص عمل جديدة وبالتالي خفض معدل البطالة.

وفقاً للهيئة العامة للإحصاء، في عام 2018، حوالي 12 مليون شخص (58 ٪ من سكان المملكة العربية السعودية) هم تحت سن 30 عامًا. القيادة السعودية تؤمن أن الشباب السعودي طموح ومستعد لتحسين الاقتصاد السعودي. وحسب تقرير رؤية المملكة 2030، صرح ولي العهد السعودي الأمير محمد بن سلمان حفظه الله بأن "ثروتنا الحقيقية تكمن في طموح شعبنا وإمكانيات جيلنا الشاب". لذلك، فإن تعزيز ثقافة ريادة الأعمال وخلق مزيد من المشاريع الصغيرة والمتوسطة بين الشباب من شأنه أن يساعد على خلق مزيد من فرص العمل لهم.

قام فريق المرصد العالمي لريادة الأعمال (GEM) بعمل دراسة على السكان السعوديين البالغين الذين تتراوح أعمارهم ما بين 18 و64 عامًا لتحديد إجمالي نشاط ريادة الأعمال في المرحلة المبكرة (TEA). تشمل هذه المرحلة رواد الأعمال الناشئين بما في ذلك أولئك الذين هم في طور تأسيس عمل تجاري وأولئك الذين بدأوا نشاطًا تجاريًا في الأشهر الثلاثة الماضية للدراسة. وأيضاً رواد الأعمال الذين يملكون عملاً تجاريًا يبلغ عمره ما بين 3 أشهر إلى 3.5 سنة.

أظهرت نتائج هذه الدراسة التي احتوت على عينة مكونة مما يقارب 4000 شخص بالغ، أن 5٪ فقط من السكان السعوديين قد بدأوا وأداروا أعمالهم التجارية لمدة تقل عن 3 أشهر، بينما كان 7٪ يديرون أعمالهم لأكثر من 3 أشهر وأقل من 3.5 سنة. توضح هذه النتائج أن مثل هذا النشاط لا يزال منخفضاً (12٪ من السكان السعوديين) ولذلك لابد من زيادة عدد رواد الاعمال السعوديين للحد من البطالة بين الشباب.

كما يوضح تقرير GEM أن 33٪ من السكان السعوديين لديهم نية في بدء عمل جديد في السنوات الثلاث المقبلة، بينما يعتقد 76٪ من السكان السعوديين أنه ستكون هناك فرص جيدة خلال الأشهر الستة المقبلة لبدء عمل تجاري في المدن التي يسكنون فيها.

تشير هذه النتائج إلى أن السوق السعودي يعتبر سوق جذاب لرواد الأعمال الجدد وأن عدداً كبيراً من السعوديين يعتمرون ولديهم النية لبدء عمل تجاري. علاوة على ذلك، تشير نتائج GEM إلى أن 78 ٪ من السكان السعوديين يعتقدون أن أصحاب الأعمال الجدد الناجحين يتمتعون بمستوى عالٍ من التميز بين فئات المجتمع. بالإضافة إلى ذلك، يتمتع السعوديين بمستويات عالية من الثقة واحترام الذات (83 ٪ من السكان السعوديين). ولكن إذا نظرنا إلى الأرقام فإننا نجد أن أنشطة ريادة الأعمال لا تزال منخفضة مقارنة بمستوى نوايا ريادة الأعمال لدى السعوديين.

لذلك سيسعى الباحث في هذه الدراسة الى معرفة أسباب الفجوة بين نوايا ريادة الأعمال وبين تطبيقها كأعمال تجارية على ارض الواقع. كما يسعى الباحث لمعرفة مسببات هذه الفجوة من خلال تحديد تلك العقبات التي تمنع الشباب السعوديين من

تحويل نواياهم الريادية إلى أعمال تجارية. قد تساعد نتائج هذه الدراسة في توفير توصيات لمتخذي القرار والتي بدورها قد تساعد في تحديد كيفية سد هذه الفجوة بين نوايا ريادة الأعمال وتطبيقها كأعمال تجارية.

كما يخطط الباحث للتركيز على العوامل الاجتماعية والمجتمعية التي قد تساعد أو تعرقل تحول النية إلى عمل تجاري، مثل دور الاقتصاد والسياسة والأنظمة واللوائح، وثقافة ريادة الأعمال، وبرامج ريادة الأعمال، والدعم الحكومي وغيره.

تتكون عينة البحث المستهدفة من الطلاب والطالبات المتوقع تخرجهم من الجامعات السعودية. يدرس هؤلاء الطلاب والطالبات في تخصصات مختلفة مثل إدارة الأعمال، والتسويق، والمالية، وإدارة الموارد البشرية، والإدارة العامة، والمحاسبة، والعلوم السياسية، والاقتصاد، ونظم المعلومات الإدارية، وإدارة الخدمات الصحية والمستشفيات.

دعت العديد من الدراسات الحديثة إلى التحقيق في فجوة نوايا ريادة الأعمال وتطبيقها كأعمال تجارية وأن عددًا محدودًا فقط من الدراسات السابقة حققت في هذه الفجوة. لذلك سوف يسعى الباحث في التحقيق في مسببات هذه الفجوة وتقديم توصيات لمتخذي القرار لسد هذه الفجوة وبالتالي زيادة عدد رواد الأعمال في المملكة.

## Appendix 2 The Privacy Note

### **What will happen to information about me that is collected during the study?**

Your information will only be used for the purposes of the study. Your information will be stored securely and your identity/information will be kept strictly confidential, except as required by law. Study findings may be published, but you will not be identified in these publications if you decide to participate in this study. In this instance, data will be stored for a period of 10 years and then destroyed.

### **Can I withdraw from the study once I've started?**

You are free to withdraw at any time before you have started answering the questionnaire. Once you have submitted it, your responses cannot be withdrawn because they are anonymous and therefore we will not be able to tell which one is yours.

**Abdulmohsen Alkhulayfi, the researcher, will be available to discuss with you further and answer any questions you may have. You can contact him on [A.Akhulayfi@uea.ac.uk](mailto:A.Akhulayfi@uea.ac.uk).**

ماذا سيحدث للمعلومات التي ستجمع عني أثناء الدراسة؟

سيتم استخدام معلوماتك لأغراض الدراسة فقط. كما سيتم تخزين معلوماتك بشكل آمن وستظل هويتك ومعلوماتك سرية للغاية، باستثناء ما يقتضيه القانون. قد يتم نشر نتائج هذه الدراسة، ولكن لن يتم التعرف عليك في هذه المنشورات في حين قررت المشاركة في هذه الدراسة.

هل يمكنني الانسحاب من الدراسة بمجرد أن أبدأ؟

لك مطلق الحرية في الانسحاب في أي وقت قبل أن تبدأ في الإجابة على الاستبيان. بمجرد تقديمه، لا يمكن سحب ردودك لأنها مجهولة المصدر، وبالتالي لن تتمكن من معرفة الإجابة التي تخصك.

يمكنك التواصل مع **عبد المحسن الخليفة**، الباحث، لمناقشة المزيد من الأسئلة والإجابة عن أي أسئلة لديك عن طريق

الأيمل: [A.Akhulayfi@uea.ac.uk](mailto:A.Akhulayfi@uea.ac.uk).

### **Appendix 3**

#### **The Informed Consent**

**Below is the Informed Consent Agreement for this study. Please review the text below and click "yes" if you agree to participate.**

**In giving my consent, I confirm that:**

- 1- I understand the purpose of the study and any risks/benefits involved.
- 2- I understand that being in this study is completely voluntary.
- 3- My decision whether to be in the study will not affect my relationship with the researchers or anyone else at the University of East Anglia, UK, King Abdulaziz University or other Saudi universities now or in the future.
- 4- I understand that as the survey data is anonymous, my data cannot be withdrawn after submission.
- 5- I understand that personal information about me that is collected over the course of this project will be stored securely and will only be used for purposes that I have agreed to.
- 6- I understand that information about me will not be given to others without my permission, except as required by law.
- 7- I understand that the results of this study may be published and that publications will not contain my name or any identifiable information about me.

## Appendix 4

### Survey welcome page

Dear Student,

You are invited to participate in a study about **The Importance of Encouraging Entrepreneurship Among the Youth Saudi Population and Its Role on Achieving the Saudi Vision 2030**.

Click [here](#) for more information about the project. This research will help in providing recommendations to the policymakers to achieve the Saudi vision 2030. You have been selected because you are a student studying at one of the Saudi universities and expected to graduate this term. The survey will take about **12 minutes to complete**. Participating in this questionnaire is optional and you can withdraw without any consequence. For more information about the Privacy Notes please click [here](#). Your decision whether to participate will not affect your current or future relationship with the researchers or anyone else at the University of East Anglia (UEA), King Abdulaziz University or other Saudi universities. The study was approved by the ethics committee at UEA, UK. Please click [here](#) to see the UEA Research Ethics Policy, and [here](#) for the Information on how we look after any data that we collect. The study is conducted by **Abdulmohsen Alkhulayfi**, a Doctoral Researcher at the University of East Anglia, UK, and a lecturer of Business Administration at King Abdulaziz University.

**I thank you in advance for your time and cooperation.**



## Appendix 5 Measurements Table

Variable	Measurements	Sources
Demographic Question	<ol style="list-style-type: none"> <li>1. What is your gender?</li> <li>2. What is your age?</li> <li>3. Which university you are studying in?</li> <li>4. Which department you are studying in?</li> <li>5. What is your nationality?</li> <li>6. Do your parents (father or mother) own a business?</li> <li>7. Do your siblings (brother or sister) own a business?</li> <li>8. Do any male/female relatives own a business?</li> <li>9. What is your household monthly income?</li> </ol>	Created by the researcher
Filter questions	<p>Are you a business owner or have you already started a business?</p> <ul style="list-style-type: none"> <li>• Yes, I am currently a business owner.</li> <li>• No, but I have previously started a business.</li> <li>• No, I am not a business owner and I have never started a business.</li> </ul> <p>Do you expect to graduate this term?</p> <ul style="list-style-type: none"> <li>• Yes</li> <li>• Maybe</li> <li>• No</li> </ul> <p>Which degree you are studying in?</p> <ul style="list-style-type: none"> <li>• Bachelor degree</li> <li>• Masters degree</li> <li>• Doctoral degree</li> </ul>	Created by the researcher

**Entrepreneurship** is the process of creating a new organisation for the principal purpose of achieving profit and growth.

**Taking a step** to start a business means that you intend to develop a business plan (written or unwritten), develop a product or service, talk with potential customers, collect information about competitors, produce financial projections, approach financial institutions or other people for funds, or acquire equipment, supplies, or premises.

Variable	Measurements	Sources
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Entrepreneurial Intention  
strength

Do you intend to take steps to  
start a business within 6  
months of graduation? Gelderen et al 2018

- I am pretty sure I will.
  - Perhaps I will, but I am not yet sure.
  - I definitely will not.
-

<p>Intention to take steps to start up a business in the next 6 months (EI) (5 Points Likert Scale)</p>	<ol style="list-style-type: none"> <li>1. I plan to take steps to start a business in the next six months after graduating.</li> <li>2. I intend to take steps to start a business in the next six months after graduating.</li> <li>3. I will try to take steps to start a business in the next six months after graduating.</li> </ol>	<p>Kautonen et al 2015</p>
<p>Attitude toward behaviour (ATB) (5 Points Likert Scale)</p>	<ol style="list-style-type: none"> <li>1. For me, taking steps to start a business within the six months following graduation would imply more advantage than disadvantages.</li> <li>2. For me, taking steps to start a business within the six months following graduation would entail a great satisfaction.</li> <li>3. For me, taking steps to start a business within the six months following graduation would be the preferred choice among various career options.</li> <li>4. For me, taking steps to start a business within the six months following graduation would be positive for me.</li> <li>5. If I had the opportunity and resources, I would take steps to start a business in the next six months.</li> </ol>	<p>Kautonen et al 2015</p>
<p>Subjective norms (SN). (5 Points Likert Scale)</p>	<ol style="list-style-type: none"> <li>1. My closest family members think that I should take steps to start a business in the six months after graduation.</li> <li>2. People who are important to me think that I should take steps to start a business in the six months after graduation.</li> <li>3. I care about the thoughts and opinions of these people who are important to me regarding taking steps in the six months after graduation.</li> </ol>	<p>Kautonen et al 2015</p>
<p>Perceived behavioral control. (5 Points Likert Scale)</p>	<ol style="list-style-type: none"> <li>1. If I wanted to, I could take steps to start a business in the six months after graduating.</li> <li>2. If I took steps to start a business in the six months after graduating, I would be able to control the progress of the process to a great degree.</li> <li>3. It would be easy for me to take steps to start a business in the six months after graduating.</li> <li>4. If I wanted to take steps to start a business in the six months after graduating, no external factor would hinder me in taking such action.</li> </ol>	<p>Kautonen et al 2015</p>

Social and societal factors (SAS) (5 Points Likert Scale)	<ol style="list-style-type: none"> <li>1. The current rules and regulations in Saudi Arabia would help me to establish and run a new business in the six months after graduation.</li> <li>2. The government support programs to entrepreneurship would help establish and run my new business in the six months after graduation. .</li> <li>3. The financial support from the financial institutions would help me to establish and run my own business in the six months after graduation.</li> <li>4. The Saudi economy condition would encourage me to start a new business in the next six months.</li> <li>5. The Saudi politics condition would encourage me to start a new business in the next six months.</li> </ol>	Created by the researcher
Questions to compare with other studies such as GUESSS and GEM. (Yes/Maybe/No).	<ol style="list-style-type: none"> <li>1. I want to be a founder (entrepreneur) working in my own business immediately after finishing my studies. (Yes/Maybe/No).</li> <li>2. I want to be a founder (entrepreneur) working in my own business sometime in the future, in the next 5 years after finishing my studies. (Yes/Maybe/No).</li> </ol>	GUESSS Study
Questions to compare with other studies such as GUESSS and GEM. (5 Points Likert - Type)	<ol style="list-style-type: none"> <li>1. The fear of failure would prevent me from starting a business.</li> <li>2. I have the knowledge, skills, and experience required to start a new business.</li> <li>3. In the next six months, there will be good opportunities for starting a business in the city where I live.</li> </ol>	GEM Project
COVID 19 Question. (5 Points Likert- Type)	The Coronavirus (COVID-19) situation would prevent me from	Created by the researcher

Culture questions. (5 Points Likert- Type)

establishing and running my own business in the next six month.

1. If one of my parents is a successful business owner, I would ask them to support me in financing my new business.
2. Wasta is essential when establishing a business in Saudi Arabia.

Created by the researcher

Q



The researcher will contact you **after six months** of graduation or after that time, and ask you to participate in a short survey (3 minutes) to see if you have **taken any steps** to start up a business. This will help the researcher in his study and would help in providing **recommendations to the policymakers to achieve the Saudi vision 2030**. If you are happy to do that, could you please provide your **WhatsApp** contact number or your **phone number**?

05

## Appendix 6

### Short survey questions

Q1

**Six months ago**, you kindly completed a survey about entrepreneurship in Saudi Arabia. One of the question we asked you then, was whether you were **intending to take steps to start up a business within 6 months of graduation or not**. Taking a step to start a business means that you have developed a business plan (written or unwritten), developed a product or service, talked with potential customers, collected information about competitors, produced financial projections, approached financial institutions or other people for funds, or acquired equipment, supplies, or premises.

Q2

⌵  Skip to

End of Block if Yes Is Selected

**In the past six months**, have you undertaken any of the **above steps or other similar steps** to start up a business?

Yes

No

### If the answer is No:

**To what extent do you agree or disagree with the following statements:**

Variables	Measurements	Sources
Family financial support (5 Points Likert Items)	The lack of financial support from my family has prevented me from taking steps to start up my business in the past six months.	Created by the researcher
financial institutions support (5 Points Likert Items)	The lack of financial support from the financial institutions has prevented me from taking steps to start up my business in the past six months.	Created by the researcher
Social connections (5 Points Likert Items)	The lack of social connections and networking has prevented me from taking steps to start up my business in the past six months.	Created by the researcher
Rules and Regulations (5 Points Likert Items)	The current rules and regulations regarding starting	Created by the researcher

Economy situation (5 Points Likert Items)	up a business have prevented me from taking steps to start up a business in the past six months. The current state of the Saudi economy led me to delay taking steps to start up a business in the past six months.	Created by the researcher
COVID-19 (5 Points Likert Items)	The coronavirus (COVID-19) situation has prevented me from taking steps to start up a business in the past six months.	Created by the researcher

Employments  
(5 Points Likert Items)

I have not taken steps to start up a business in the past six months because I was hired as an employee.

Created by the researcher


Higher degree  
(5 Points Likert Items)

I have not taken steps to start up a business in the past six months because I decided to pursue my education and get a higher degree.

Created by the researcher

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Q12 💡

⌵  Skip to

End of Block if Please write&nbsp;in the te... Is Equal to

**Please write in the text below any other reasons that have prevented from taking steps to start up a business? Please write as much as you can since this would help the researcher in his analysis, and would provide recommendations to the policymakers.**

**If the answer is Yes:**

Which of the following **steps** have you undertaken? (you can choose more **than one option** in the box below)

Items	Steps to start up a business
Developing a business plan	<input type="checkbox"/>
Developing a product or services	
Talking with potential customers	
Collecting information about competitors	
Producing financial projections	
Approaching financial institutions or other people for funds	
Acquiring equipment, supplies or premises	
Searching for business location	
Getting a commercial registration	
None of the above	

---



**If the answer is No or Yes:**

Q15



Could you please write your mobile phone number, so the researcher can combine your answers in this survey with those given in the previous survey?

[+ Add page break](#)

Q16

The researcher aims to have interviews with the study **participants** to discuss what barriers or obstacles might prevent them from taking steps to start a business. The interviews will be conducted by **phone, Skype or WhatsApp** with the researcher. This will help the researcher in his study and would help in providing **recommendations to the policymakers to achieve the Saudi vision 2030**. Are you happy to do that?

- Yes
- No

## Appendix 7

### Interview Information Sheet

#### Participant Information Statement

##### (1) What is this study about?

You are invited to take part in a research study about the **The Importance of Encouraging Entrepreneurship Among the Youth Saudi Population and Its Role on Achieving the Saudi Vision 2030**. You have been invited to participate in this study because you were a student studying in one of the Saudi universities. This Participant Information Statement tells you about the research study. Knowing what is involved will help you decide if you want to take part in the study. Please read this sheet carefully and ask questions about anything that you don't understand or want to know more about. Participation in this research study is voluntary. By giving consent to take part in this study you are telling us that you:

- ✓ Understand what you have read.
- ✓ Agree to take part in the research study as outlined below.
- ✓ Agree to the use of your personal information as described.

##### (2) Who is running the study?

The study is conducted by **Abdulmohsen Alkhulayfi**, a Doctoral Researcher at the University of East Anglia, UK, and a lecturer of Business Administration at King Abdulaziz University. The researcher's supervisors are professor Sara Connolly and Associate Professor Dr Susan Sayce.

##### (3) What will the study involve for me?

You will be asked to participate in an interview to answer some questions about the obstacles and barriers of opening a business in Saudi Arabia.

##### (4) How much of my time will the study take?

It is expected that the interview will take between 40-60 minutes to complete.

##### (5) Do I have to be in the study? Can I withdraw from the study once I've started?

Being in this study is completely voluntary and you do not have to take part. Your decision whether to participate will not affect your current or future relationship with the researchers or anyone else at the University of East Anglia, King Abdulaziz University or other Saudi Universities. If you decide to take part in the study and then change your mind you are free to withdraw at any time before the date 01/12/2020.

##### (6) Are there any risks or costs associated with being in the study?

Aside from giving up your time, we do not expect that there will be any risks or costs associated with taking part in this study.

**(7) Are there any benefits associated with being in the study?**

Your responses are likely to provide details about entrepreneurship among the youth Saudi population and its role on achieving the Saudi vision 2030. Also, it will help the researcher in his study and would help in providing recommendations to the policymakers to achieve the Saudi vision 2030. It may also help to increase the number of entrepreneurs among the Saudi citizens in the future, and eventually improve the Saudi economy.

**(8) What will happen to information about me that is collected during the study?**

Your information will only be used for the purposes outlined in this Participant Information Statement, unless you consent otherwise. Data management will follow the 2018 General Data Protection Regulation Act and the University of East Anglia Research Data Management Policy (2015). Your information will be stored securely and your identity/information will be kept strictly confidential, except as required by law. Study findings may be published, but you will not be identified in these publications if you decide to participate in this study. In this instance, data will be stored for a period of 10 years and then destroyed.

**(9) What if I would like further information about the study?**

When you have read this information, Abdulmohsen will be available to discuss it with you further and answer any questions you may have. You can contact him on [A.Alkhulayfi@uea.ac.uk](mailto:A.Alkhulayfi@uea.ac.uk).

**(10) Will I be told the results of the study?**

You have a right to receive feedback about the overall results of this study. You can tell me that you wish to receive feedback by contacting me directly in my email [A.Alkhulayfi@uea.ac.uk](mailto:A.Alkhulayfi@uea.ac.uk). I will send you a summary of the findings. I will not be able to link your data to your email address and so this does offer some level of anonymity to you directly. You will receive this feedback after the study is finished.

**(11) What if I have a complaint or any concerns about the study?**

If there is a problem, please let me know. You can contact me by email.

[A.Alkhulayfi@uea.ac.uk](mailto:A.Alkhulayfi@uea.ac.uk)

If you would like to speak to someone else, you can contact my supervisors:

Professor Sara Connolly

[Sara.Connolly@uea.ac.uk](mailto:Sara.Connolly@uea.ac.uk)

Phone: 004401603593410

Associate Professor Dr Susan Sayce

[S.Sayce@uea.ac.uk](mailto:S.Sayce@uea.ac.uk)

Phone: 004401603591286

**In giving my consent, I confirm that:**

- 1- I understand the purpose of the study and any risks/benefits involved.
- 2- I understand that being in this study is completely voluntary.
- 3- My decision whether to be in the study will not affect my relationship with the researchers or anyone else at the University of East Anglia, UK, King Abdulaziz University or other Saudi universities now or in the future.
- 4- I understand that as the survey data is not anonymous, and my I can withdraw my data at any time before the date 30/12/2020.
- 5- I understand that personal information about me that is collected over the course of this

project will be stored securely and will only be used for purposes that I have agreed to.

6- I understand that information about me will not be given to others without my permission, except as required by law.

7- I understand that the results of this study may be published and that publications will not contain my name or any identifiable information about me.

### **Participant Signature**

**Appendix 8**  
**Interview questions**

Participants who have NOT taken any actions in the last six months

**The Interview Questions (Second Wave Pilot) (40-60 minutes):**

**(core questions):**

Q1: What do you currently do?

Q2: Which region you are originally from?

Q3: Tell me about starting a business in Saudi Arabia. How challenging do you think it is to start up a business at the moment?

Q4: What would help you start up a business?

Q5: What would need to change to help you set up a business?

Q6: What is holding you back from starting up a business ?(confidence, fear of failure)

Q7: Six months ago, in your responses to the survey, you indicated that you hoped to set up a business, but you have not taken any steps since graduation. Do you not feel ready to set up a business? Why do you feel not ready to start a business? (no ideas, not enough money,)

Q8: How do you think COVID 19 has affected entrepreneurship in Saudi Arabia since your graduation? Then follow up in relation to themselves in their response.

.....

**(Planned follow- up questions)**

Q9: People often say that the support from your family, relative or friends is essential to start up a business. What is your opinion on this? Has this prevented you from starting your business?

Q10: Have you asked your parents, relatives or friends to support you in your business? Did they provide any support? What sort of help could they offer, Financing, business knowledge experience, contacts, moral support?

Q11: Where could you go to get finance for your business? From the financial institutions, family, friends? What about the financial institutions support? Have you applied for them to finance your business? Are they helpful or not?

Q12: We know the government is eager to help new entrepreneurs in SA and has government programs, how do you think they could make that better for new entrepreneurs. How did you access these programs?

Q13: Social connections and networking are important in business. How important are these contacts for you and how could you use them? How useful do you think wasta could be in helping you set up a business?

Q14: Where would you go to get information about the rules and regulations for starting up a business? what would you recommend to ensure that those who want to be entrepreneurs have access to this knowledge? How has your education helped to prepare you to set up your own business?

Q15: When you are planning to start up your business?

Q16: Any thoughts or comments you want to add?

.....

### (Unplanned follow- up questions)

Any questions that arise during the interview based on participant responses. For example, you mentioned that you do not have enough experience to start up a business, can you tell me more about that?

س١ : ماذا تعمل حالياً؟

س٢ : من أي منطقة؟

س٣ : أخبرني عن بدء وإنشاء عمل تجاري في السعودية؟ ما مدى صعوبة ذلك في اعتقادك؟

س٤ : ماذا يمكن ان يساعدك في انشاء عملك التجاري؟

س٥ : ما الذي يمكن تغييره لكي يساعد في إنشاء عملك التجاري؟

س٦ : ما هو الشيء الذي يمنعك من انشاء عملك التجاري الخاص؟ الخوف من الفشل، عدم الثقة في المهارات او الخبرة؟

س٧ : قبل ستة أشهر، كنت تتمنى او تنوي ان تبدأ عملك التجاري، ولكن لم تتخذ أي خطوات لبدء عملك التجاري منذ تخرجك من الجامعة. هل تعتقد أنك لست جاهزاً بعد؟ لماذا تعتقد أنك لست جاهزاً بعد؟

س٨ : في اعتقادك كيف أثرت جائحة كورونا على ريادة الأعمال في السعودية منذ تخرجك؟ هل أثرت عليك شخصياً؟ تابع في الأسئلة بناءً على جواب المشترك.

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س٩ : الناس دائماً يقول ان الدعم من العائلة او الأقارب أو الأصدقاء ضروري لبدء عمل تجاري. ما هو رأيك في ذلك؟ هل منعك هذا من بدء عملك التجاري؟

س١٠: هل طلبت من والديك أو أقاربك أو اصدقائك ان يدعموك في بداية عملك التجاري؟ وهل قدمو لك الدعم ام لا؟ ما نوع الدعم الذي قدموه لك؟ دعم مالي، معلومات وخبره عن البنزنس؟

س١١: إلى أين ممكن أن تذهب للحصول على دعم مالي لبدء عملك التجاري؟ ماذا عن دعم المؤسسات المالية كالبنوك وغيره؟ هل قدمت عليهم لتمويل عملك التجاري؟ هل يقدمون هذا الدعم أم لا؟

س١٢: المتعارف عليه حالياً انه في اهتمام كثير بريادة الأعمال وراود الأعمال الجدد في السعودية، وأيضاً تم تقديم برامج كثيرة لدعم هؤلاء الرواد؟ برأيك، ماذا يمكن لصانعي القرار ان يفعلوا لكي يطورو من هذه البرامج لمساعدة رواد الأعمال الجدد؟

س١٣: العلاقات الاجتماعية والمعارف الشخصية مهمة في نشاط الأعمال التجارية؟ ما مدى أهمية ذلك بالنسبة إليك وكيف يمكنك استخدامها؟ ما هو أهمية الوساطة في المساعدة في إنشاء عمل تجاري؟

س١٤: إلى أين قد تذهب للحصول على معلومات عن الأنظمة واللوائح الخاصة ببدء عمل تجاري؟ وما الذي تنصح به لتحسين وتسهيل عملية الحصول على هذه المعرفة بالنسبة لرواد الأعمال الجدد؟ هل ساعدك تعليمك الجامعي في عملية التحضير لبدء عملك التجاري؟

س١٥: متي تخطط ان تبدأ عملك التجاري؟

س١٦: هل يوجد لديك أي تعليقات أو افكار ترغب في اضافتها؟

## **Participants who have taken some action in the last six months**

### **The Interview Questions (Second Wave Pilot) (40-60 minutes):**

#### **(Introductory questions):**

Q1: What do you currently do?

Q2: Which region you are originally from?

Q3: Which stage you are in the processes of starting up a business? For example, have you taken any actions such as finding a business location or getting a business registration. Or your business is already up and running.

Q4: Tell me about starting a business in Saudi Arabia. How challenging do you think it is to start up a business at the moment?

Q5: What would help you to start up a business?

Q6: What would need to change to help you set up a business?

Q7: What would hold you back from setting up a business (confidence, fear of failure)?

Q8: Do you feel that you are not ready to start a business? (you do not enough money for example)

Q9: How do you think the COVID 19 situation could affect or prevent you from setting up your business?

.....

**(Planned follow- up questions)**

Q10: People often say that the support from your family, relative or friends is essential to start up a business. What is your opinion on this? Has this prevented you from starting your business?

Q11: Have you asked your parents, relatives or friends to support you in your business? Did they provide any support? What sort of help could they offer, Financing, business knowledge experience, contacts, moral support?

Q12: Where could you go to get finance for your business? From the financial institutions, family, friends? What about the financial institutions support? Have you applied for them to finance your business? Are they helpful or not?

Q13: We know the government is eager to help new entrepreneurs in SA and has government programs, how do you think they could make that better for new entrepreneurs. How did you access these programs?

Q14: Social connections and networking are important in business. how important are these contacts for you and how could you use them? How useful do you think wasta could be in helping you set up a business?

Q15: Where would you go to get information about the rules and regulations for starting up a business? what would you recommend to ensure that those who want to be entrepreneurs have access to this knowledge? How has your education helped to prepare you to set up your own business?

Q16: When you are planning to start up your business and get it ready?

Q17: Any thoughts or comments you want to add?

.....

**(Unplanned follow- up questions)**

Any questions that arise during the interview based on participant responses. For example, you mentioned that you do not have enough experience to start up a business, can you tell me more about that?



س ١: ماذا تعمل حالياً؟

س ٢: من أي منطقة؟

س ٣: اليزنس تبعك في أي مرحلة؟ هل مثلاً بدأت في البحث عن دعم مالي أو موقع جغرافي لليزنس؟ أو هل اليزنس فعلياً بدأ وشغال؟

س ٤: أخبرني عن بدء وإنشاء عمل تجاري في السعودية؟ ما مدى صعوبة ذلك في اعتقادك؟

س ٥: ماذا يمكن ان يساعدك في انشاء عملك التجاري؟

س ٦: ما الذي يمكن تغييره لكي يساعد في إنشاء عملك التجاري؟

س ٧: ما هو الشيء الذي قد يمنعك من انشاء عملك التجاري الخاص؟ الخوف من الفشل، عدم الثقة في المهارات او الخبرة؟

س ٨: هل تعتقد بأنك لست جاهزاً بعد لبدأ مشروعك التجاري؟ يعني لا يوجد لديك رأس مال مثلاً؟  
س ٩: في اعتقادك كيف أثرت جائحة كورونا على ريادة الأعمال في السعودية منذ تاريخ تخرجك؟ هل أثرت عليك شخصياً؟ تابع في الأسئلة بناءً على جواب المشترك.

س ١٠: الناس دائماً يقولون ان الدعم من العائلة او الأقراب أو الأصدقاء ضروري لبدء عمل تجاري. ما هو رأيك في ذلك؟ هل منعك أو ساعدك هذا من بدء عملك التجاري؟

س ١١: هل طلبت من والديك أو أقاربك أو اصدقائك ان يدعموك في بداية عملك التجاري؟ وهل قدموا لك الدعم ام لا؟ ما نوع الدعم الذي قدموه لك؟ دعم مالي، معلومات وخبره عن اليزنس؟

س ١٢: إلى أين ممكن أن تذهب للحصول على دعم مالي لبدء عملك التجاري؟ ماذا عن دعم المؤسسات المالية كالبنوك وغيره؟ هل قدمت عليهم لتمويل عملك التجاري؟ هل يقدمون هذا الدعم أم لا؟

س ١٣: المتعارف عليه حالياً انه في اهتمام كثير بريادة الأعمال وراود الأعمال الجدد في السعودية، وأيضاً تم تقديم برامج كثيرة لدعم هؤلاء الرواد؟ برأيك، ماذا يمكن لصانعي القرار ان يفعلوا لكي يطورو من هذه البرامج لمساعدة رواد الأعمال الجدد؟

س ١٤: العلاقات الاجتماعية والمعارف الشخصية مهمة في نشاط الأعمال التجارية؟ ما مدى أهمية ذلك بالنسبة إليك وكيف يمكنك استخدامها؟ ما هو أهمية الوساطة في المساعدة في إنشاء عمل تجاري؟

س ١٥: إلى أين قد تذهب للحصول على معلومات عن الأنظمة واللوائح الخاصة ببدء عمل تجاري؟ وما الذي تنصح به لتحسين وتسهيل عملية الحصول على هذه المعرفة بالنسبة لرواد الأعمال الجدد؟ هل ساعدك تعليمك الجامعي في عملية التحضير لبدء عملك التجاري؟

س ١٦: متي تخطط ان تبدأ عملك التجاري؟

س ١٧: هل يوجد لديك أي تعليقات أو افكار ترغب في اضافتها؟

**Appendix 9  
Action Plan**

**Research Time Frame (4 years)**

Activities	2019			2020											
	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
Research topic approval	█	█	█												
Research gap and methodology			█	█	█										
Ethics approval (pilot study)					█										
Designing the survey (pilot)						█	█								
Data collection- survey (pilot)							█								
Probation review report							█	█							
Probation review									█						
Data analysis-survey (pilot)								█	█						
Working on the literature review										█	█				
Working on entrepreneurship & Saudi context											█	█			
Data collection- short survey & interviews (pilot)													█		
Ethics approval & data collection – survey (first wave during COVID-19 restrictions)														█	█

Activities	2021												2022		
Months	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
Data analysis- 2020 survey (1 <sup>st</sup> wave)	Blue	Blue	Blue	Blue											
Working on entrepreneurial intention and action gap					Grey	Grey	Grey								
Data Collection - short survey & interviews (2 <sup>nd</sup> wave)								Orange	Orange	Orange	Orange				
Data collection – survey (the 2021 sample- after COVID-19 restrictions)											Brown	Brown	Brown		
Interviews transcription, coding, and data analysis												Grey	Grey	Grey	Grey

Activities	2022										2023					
Months	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	
Writing up the qualitative data chapter	Red															
Data analysis- the 2020 & 2021 sample surveys		Light Blue	Light Blue	Light Blue												
Data collection & analysis of the short survey (the sample of 2021)				Dark Grey												
Annul leave					Light Green											
Writing up findings of quantitative data chapter						Grey										
Writing up research methodology and approach chapter							Blue	Blue								

Writing up about entrepreneurship and the entrepreneurial intentions															
Writing up about the Saudi Arabian context															
Writing up about social and societal factors role in the intention and action gap															
Writing up discussion and conclusion chapter															
Revision and proofreading															
Activities	2023														
Months	7	8	9	10											
Revision and proofreading															
Submission and viva															

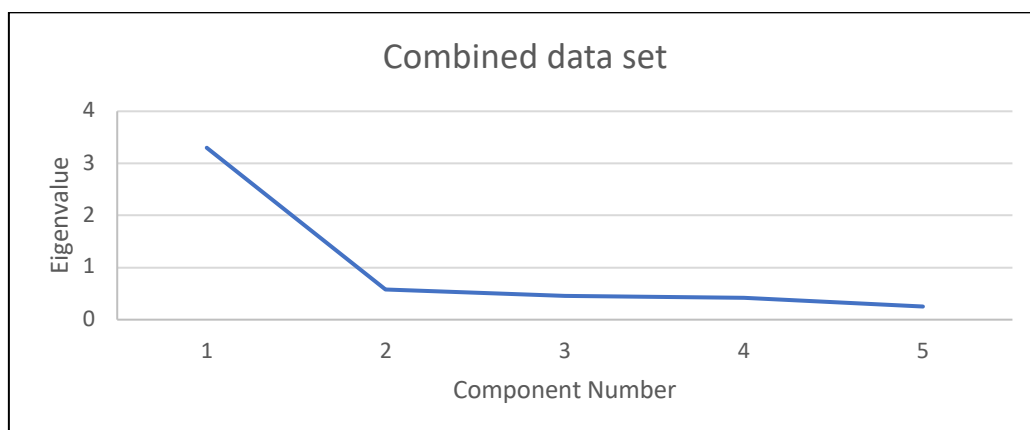
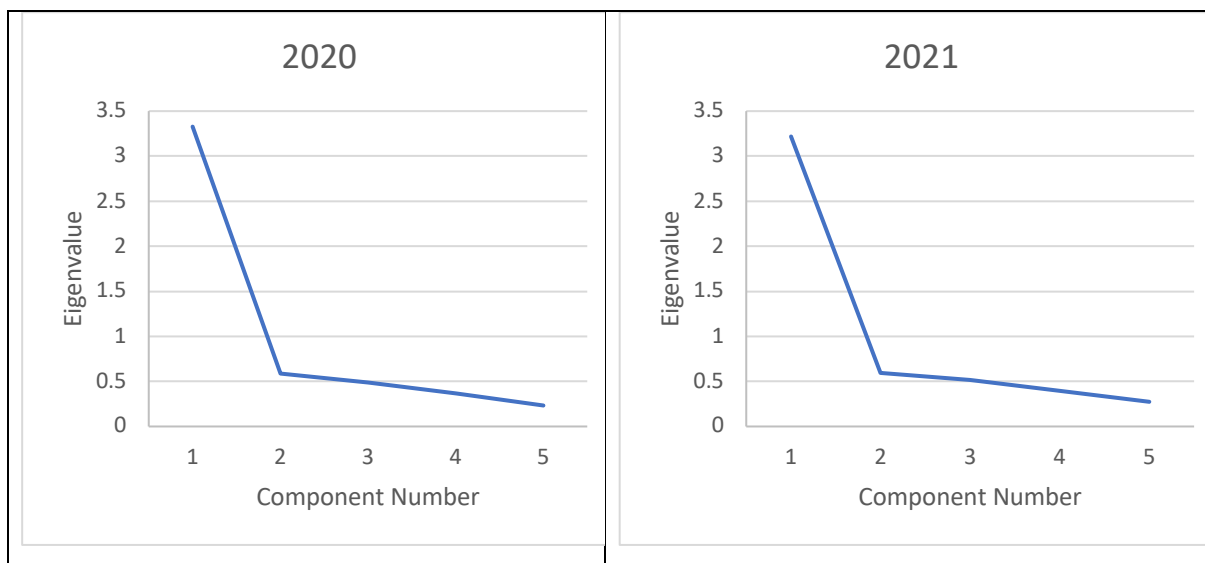
## Appendix 10

### Findings from the quantitative analysis

The first EFA was performed on the ATB measure. For this measure, in the 2020 group, the value of the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.85, and the Bartlett sphericity test score was 730.56 ( $p < .001$ ). This factor yielded an eigenvalue of 3.33, which explained 66.56% of the variance. The scree plot confirmed the one-factor solution as indicated in Figure 17. The factor loadings ranged from 0.75 and 0.89 (see Table 19).

For the ATB measure, in the 2021 group, the value of the Kaiser-Meyer-Olkin measure of sampling adequacy was also 0.85, and the Bartlett sphericity test score was 500.69 ( $p < 0.001$ ). This factor yielded an eigenvalue of 3.22, which explained 66.37% of the variance. The scree plot confirmed the one-factor solution as indicated in Figure 10.1. The factor loadings ranged from 0.71 to 0.84 (see Table 20).

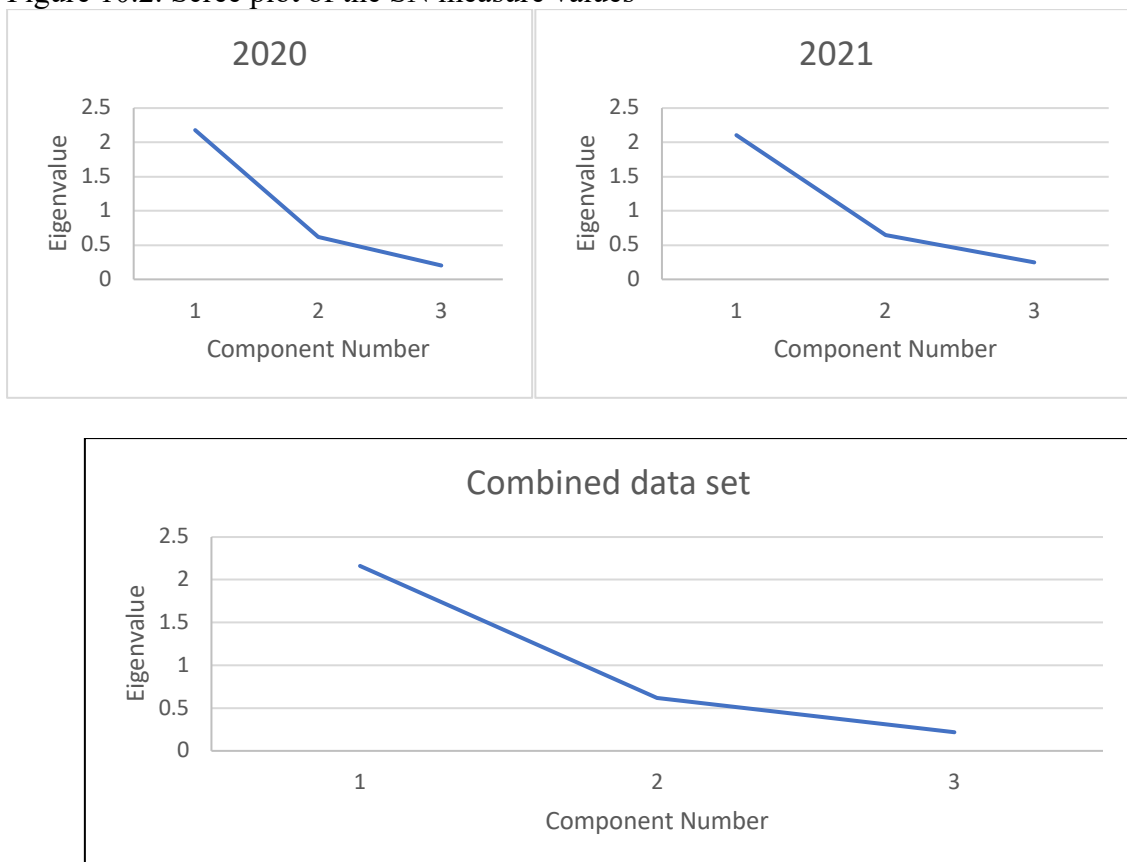
Figure 10.1. Scree plot of the ATB measure values



The second EFA was performed on SN. In the 2020 sample, the EFA results showed that the value of the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.64, and the Bartlett sphericity test score was 377.57 ( $p < 0.001$ ). This factor produced an eigenvalue of 2.18, which accounts for 72.60% of the variance. The examination of the scree plot verified the one-factor solution for this scale, as illustrated in Figure 10.2. The factor loadings ranged from 0.73 to 0.91 (see Table 19).

Similar to the results for the 2020 sample, the EFA results for SN showed that the value of the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.63, and the Bartlett sphericity test score was 243.20 ( $p < 0.001$ ). This factor produced an eigenvalue of 2.10, which accounts for 70.16% of the variance. The examination of the scree plot also verified the one-factor solution for this scale, as illustrated in Figure 18. The factor loadings ranged from 0.72 and 0.91 (see Table 20).

Figure 10.2. Scree plot of the SN measure values

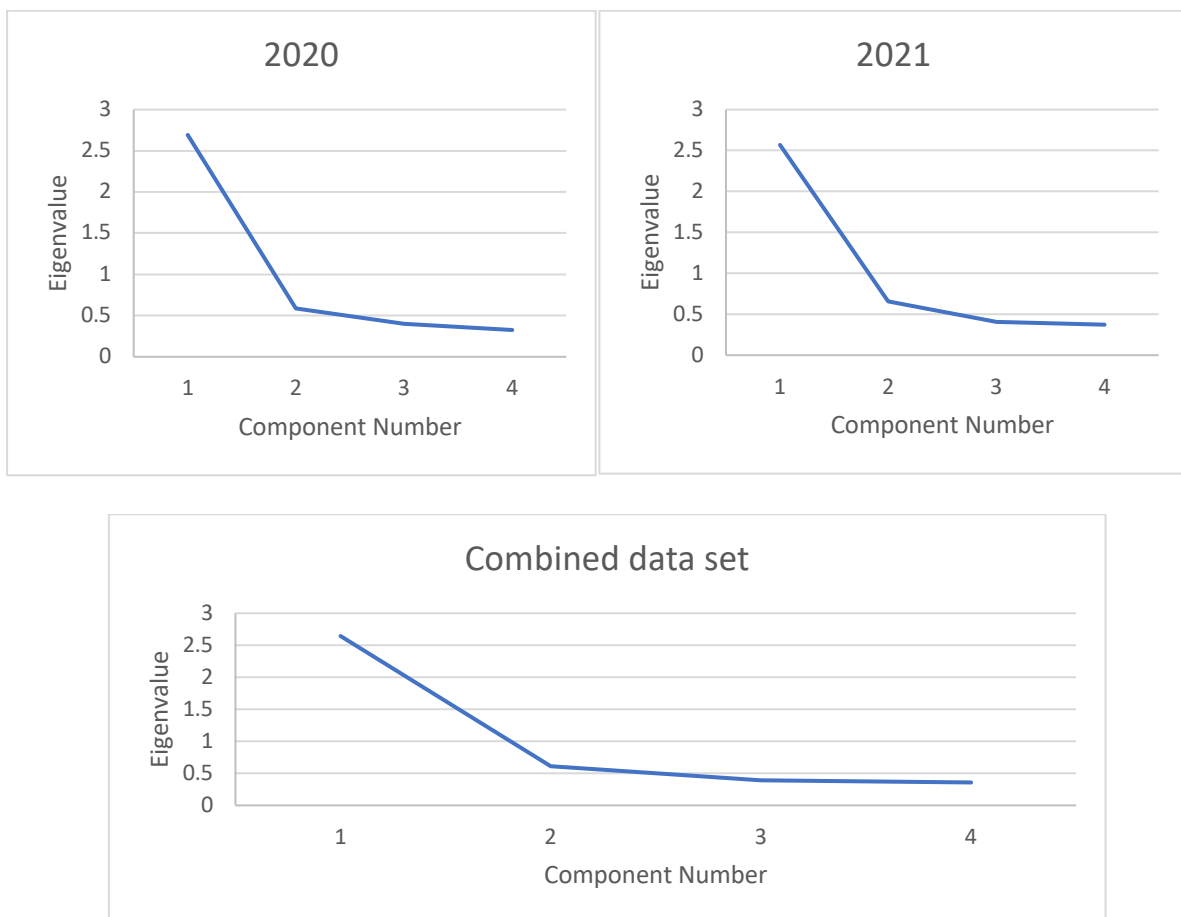


The third EFA was performed on PBC. In the 2020 sample, the EFA results for the PBC demonstrated that the value of the Kaiser-Meyer-Olkin measure of sampling adequacy was

0.78, and the Bartlett sphericity test score was 461.06 ( $p < .001$ ). This factor generated an eigenvalue of 2.69, which accounts for 67.31% of the variance. The investigation of the scree plot also verified a clear one-factor solution for this measure, as reported in Figure 19. The factor loadings ranged from 0.79 to 0.86 (see Table 19).

Similarly, in the 2021 sample, the EFA results for PBC demonstrated that the value of the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.76, and the Bartlett sphericity test score was 307.27 ( $p < 0.001$ ). This factor generated an eigenvalue of 2.57, which accounts for 64.21% of the variance. The scree plot also verified a clear one-factor solution for this measure, as reported in Figure 10.3. The factor loadings ranged from 0.78 to 0.82 (see Table 20).

Figure 10.3. Scree plot of the PBC measure values.

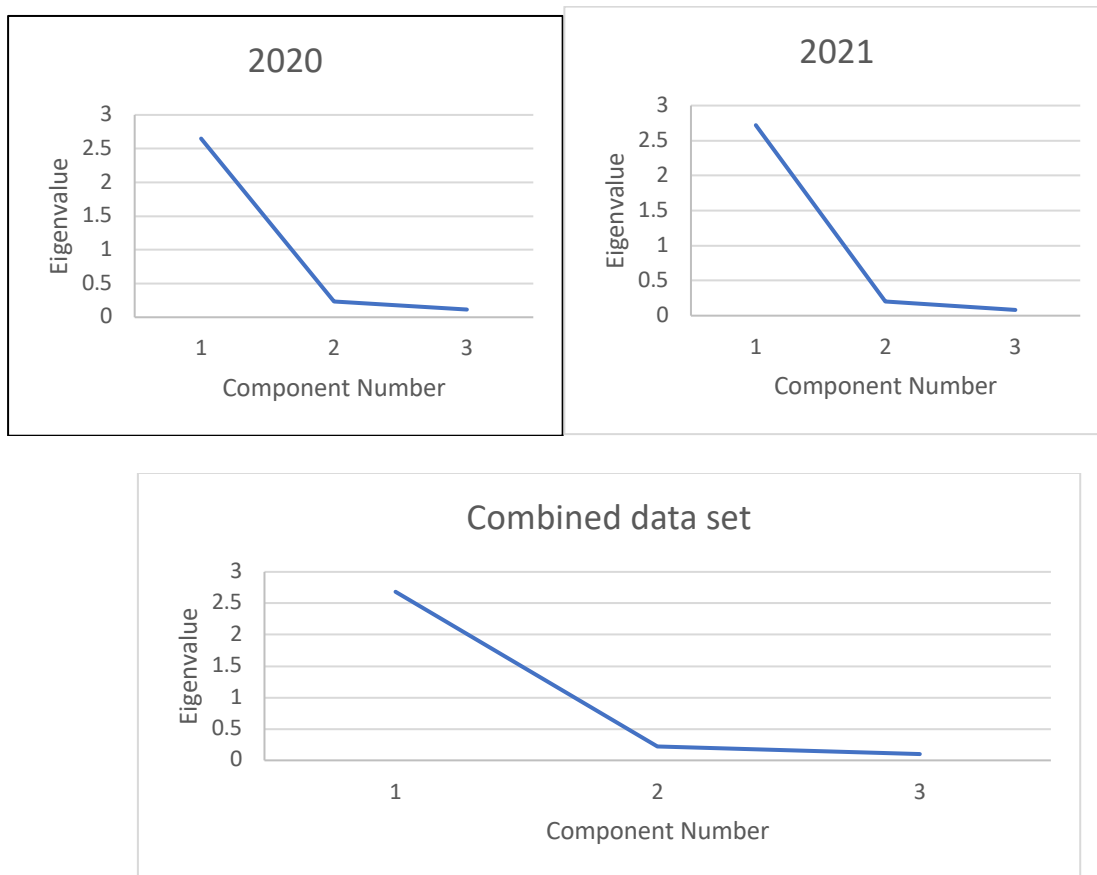


The fourth EFA was conducted on EI. In the 2020 sample, the EFA for EI revealed that the value of the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.74, and the Bartlett sphericity test score was 777.46 ( $p < 0.001$ ). This factor had an eigenvalue of 2.64, which explains 88.30% of the variance. The scree plot provided further evidence to support a one-

factor solution for this measure, as shown in Figure 20. The factor loadings ranged from 0.92 to 0.96 (see Table 19).

In the 2021 sample, the EFA for EI revealed that the value of the Kaiser-Meyer-Olkin measure of sampling adequacy was also 0.74, and the Bartlett sphericity test score was 711.62 ( $p < 0.001$ ). This factor had an eigenvalue of 2.72, which explains 90.66% of the variance. The scree plot provided further evidence to support a one-factor solution for this measure, as shown in Figure 10.4. The factor loadings ranged from 0.93 to 0.97 (see Table 8).

Figure 10.4. Scree plot of the EI measure values



The final EFA was performed on SAS, the items of which were created by the researcher. In the 2020 sample, the analysis provided evidence that suggests the suitability of the factor analysis (value of the Kaiser-Meyer-Olkin measure of sampling adequacy = 0.83; Bartlett sphericity test score = 704.96;  $p < 0.001$ ) for SAS. This factor had an eigenvalue of 3.34, which accounts for 66.73% of the variance. The scree plot provided evidence that supports a one-factor solution for this measure, as reported in Figure21. The factor loadings ranged from 0.70 to 0.87 (see Table 10.1).



In the 2021 sample, the analysis provided evidence that suggested the suitability of the factor analysis (value of the Kaiser-Meyer-Olkin measure of sampling adequacy = 0.70; Bartlett sphericity test score = 446.44;  $p < 0.001$ ) for SAS. This factor had an eigenvalue of 2.97, which accounts for 59.47% of the variance. The scree plot provided evidence that supports a one-factor solution for this measure, as reported in Figure 10.5. The factor loadings ranged from 0.61 to 0.82 (see Table 20).

Figure 10.5. Scree plot of the SAS measure values

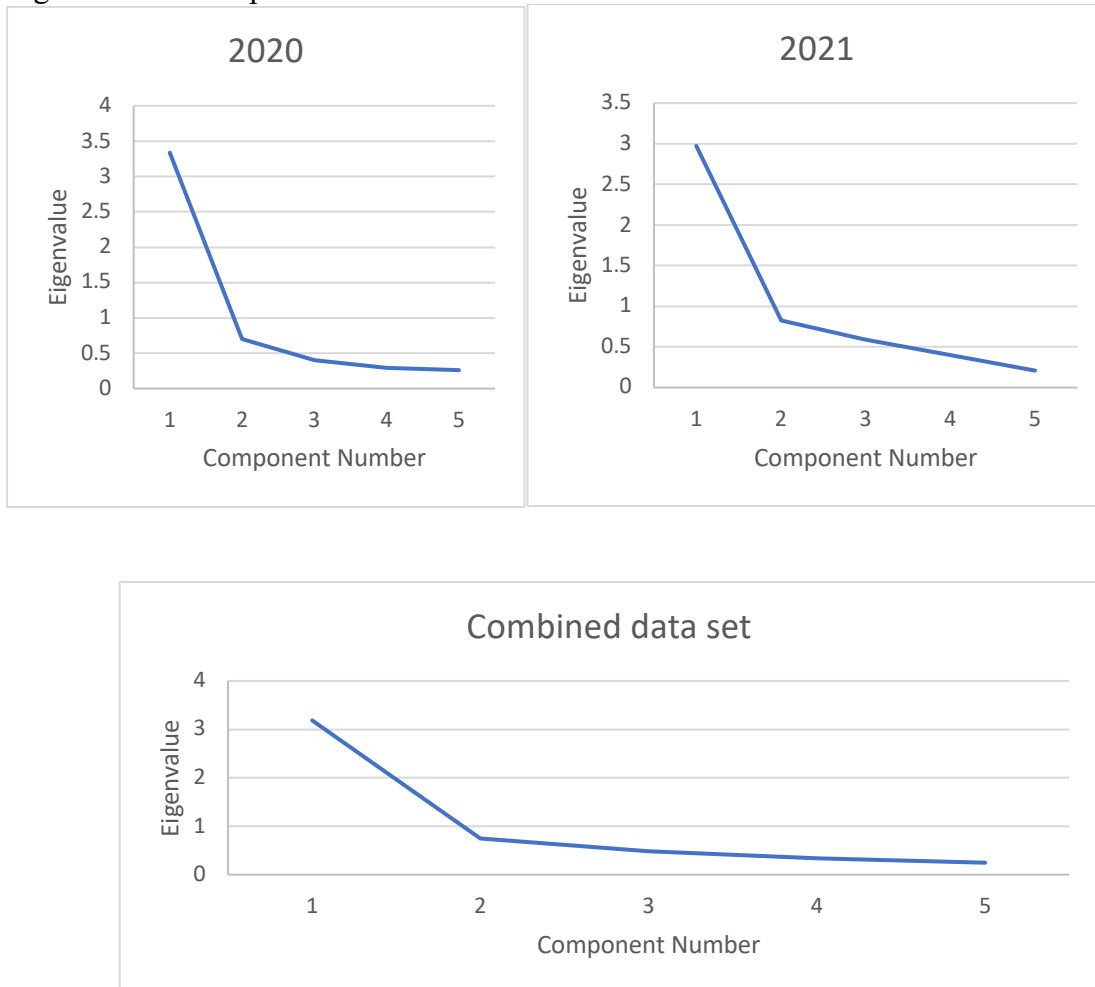


Table 10.1. Descriptive statistics and factor loadings for each item in the 2020 sample

Item	Min	Max	Mean	SD	Skew	Kurt	Factor loading
ATB 1	1	5	3.68	1.03	-0.29	-0.77	0.81
ATB 2	1	5	3.93	0.98	-0.52	-0.59	0.85
ATB 3	1	5	3.41	1.15	-0.13	-0.92	0.78
ATB 4	1	5	3.86	0.98	-0.49	-0.65	0.89
ATB 5	1	5	4.26	0.91	-1.05	0.19	0.75
SN 1	1	5	3.29	1.18	-0.11	-0.87	0.91
SN 2	1	5	3.40	1.21	-0.20	-0.95	0.91
SN 3	1	5	3.75	1.06	0.59	-0.32	0.73
PBC 1	1	5	3.80	1.01	-0.60	-0.11	0.80
PBC 2	1	5	3.68	1.02	-0.41	-0.38	0.83
PBC 3	1	5	3.03	1.15	0.10	-0.83	0.86
PBC4	1	5	3.24	1.11	-0.06	-0.72	0.79
EI 1	1	5	3.49	1.10	-0.15	-0.95	0.93
EI 2	1	5	3.58	1.10	-0.17	-1.05	0.96
EI 3	1	5	3.81	1.07	-0.55	-0.67	0.92
SAS 1	1	5	3.76	1.05	-0.78	0.27	0.83
SAS 2	1	5	3.74	1.00	-0.55	0.02	0.87
SAS 3	1	5	3.65	1.08	-0.55	-0.36	0.85
SAS 4	1	5	3.88	1.01	-0.74	0.23	0.82
SAS 5	1	5	3.47	1.05	-0.38	-0.25	0.70

Table 10.2. Descriptive statistics and factor loadings for each item in the 2021 sample

Item	Min	Max	Mean	SD	Skew	Kurt	Factor loading
ATB 1	1	5	3.38	1.02	-0.16	-0.64	0.77
ATB 2	1	5	3.63	0.95	-0.32	-0.40	0.84
ATB 3	1	5	3.16	1.18	-0.18	-0.90	0.80
ATB 4	1	5	3.62	0.98	0.49	-0.65	0.88
ATB 5	1	5	4.26	1.04	-0.57	-0.21	0.72
SN 1	1	5	2.94	1.13	0.10	-0.82	0.88
SN 2	1	5	3.06	1.12	-0.27	-0.77	0.90
SN 3	1	5	3.48	1.07	-0.51	-0.32	0.72
PBC 1	1	5	3.65	1.01	-0.64	-0.05	0.78
PBC 2	1	5	3.51	0.97	-0.12	-0.61	0.82
PBC 3	1	5	2.88	1.17	0.23	-0.85	0.81
PBC 4	1	5	3.10	1.08	-0.01	-0.78	0.80
EI 1	1	5	3.30	1.13	-0.26	-0.60	0.96
EI 2	1	5	3.29	1.13	-0.25	-0.63	0.97
EI 3	1	5	3.48	1.12	-0.64	-0.51	0.93
SAS 1	1	5	3.79	0.97	-0.77	0.70	0.80
SAS 2	1	5	3.82	0.90	-0.59	0.58	0.82
SAS 3	1	5	3.65	1.05	-0.54	-0.30	0.79
SAS 4	1	5	3.86	0.91	-0.64	0.40	0.82
SAS 5	1	5	3.43	1.03	-0.24	-0.21	0.61

Table 10.3. Descriptive statistics of the analysed variables for the 2020 sample

Variable	Min	Max	Mean	SD	Skewness		Kurtosis	
					Statistics	SE	Statistics	SE
1. EI	1	5	3.62	1.02	-0.27	0.14	-0.90	0.28
2. ATB	1	5	3.82	0.82	-0.37	0.14	-0.54	0.28
3. SN	1	5	3.47	0.97	-0.16	0.14	-0.71	0.28
3. PBC	1	5	3.43	0.87	-0.07	0.14	-0.32	0.28
4. SAS	1	5	3.71	0.84	-0.60	0.14	0.58	0.29

Note: SE = standard error

Table 10.4. Descriptive statistics of the analysed variables for the 2021 sample

Variable	Min	Max	Mean	SD	Skewness		Kurtosis	
					Statistic	SE	Statistic	SE
1. EI	1	5	3.36	1.07	-0.34	0.16	-0.43	0.32
2. ATB	1	5	3.59	0.82	-0.25	0.16	-0.26	0.32
3. SN	1	5	3.16	0.92	-0.06	0.16	-0.20	0.32
3. PBC	1	5	3.28	0.85	0.01	0.16	-0.22	0.32
4. SAS	1	5	3.70	0.75	-0.37	0.14	0.39	0.33

Note: SE = standard error

Table 10.5. Reliability for the 2020 and 2021 samples

Variable	$\alpha$	$\alpha$
	2020	2021
1. EI	0.93	0.95
2. ATB	0.87	0.86
3. SN	0.81	0.79
4. PBC	0.83	0.81
5. SAS	0.83	0.70

Table 10.6. Simple linear regression analysis results of SAS and EI for the 2020 sample

Model Summary									
Model	R	R Square	Adjusted R Sq	Std. Error of t	Change Statistics				
					R Square Char	F Change	df1	df2	
1	.294a	0.087	0.083	0.98269	0.087	25.971	1	274	
a Predictors: (Constant), SAS									
ANOVAa									
Model		Sum of Squares	df	Mean Square	F	Sig.			
1	Regression	25.08	1	25.08	25.971	<.001b			
	Residual	264.598	274	0.966					
	Total	289.677	275						
a Dependent Variable: EI									
b Predictors: (Constant), SAS									
Coefficientsa									
Model		Unstandardized Coefficients		Standardized	t	Sig.			
		B	Std. Error	Beta					
1	(Constant)	2.303	0.267		8.621	<.001			
	SAS	0.358	0.07	0.294	5.096	<.001			
a Dependent Variable: EI									

Table 10.7. Simple linear regression analysis results of SAS and EI for the 2021 sample

Model Summary										
Model	R	R Square	Adjusted R Sq	Std. Error of t	Change Statistics					
					R Square Char	F Change	df1	df2	Sig. F Change	
1	.389a	0.151	0.147	0.999	0.151	38.508	1	216	<.001	
a Predictors: (Constant), SAS										
ANOVAa										
Model		Sum of Square	df	Mean Square	F	Sig.				
1	Regression	38.465	1	38.465	38.508	<.001b				
	Residual	215.758	216	0.999						
	Total	254.223	217							
a Dependent Variable: EI										
b Predictors: (Constant), SAS										
Coefficientsa										
Model		Unstandardized Coefficients		Standardized	t	Sig.				
		B	Std. Error	Beta						
1	(Constant)	1.312	0.341		3.854	<.001				
	SAS	0.56	0.09	0.389	6.205	<.001				
a Dependent Variable: EI										

Table 10.8. Simple linear regression analysis results for SAS and EI (combined data set)

Model Summary										
Model	R	R Square	Adjusted R Sq	Std. Error of t	Change Statistics					
					R Square Char	F Change	df1	df2	Sig. F Change	
1	.332a	0.11	0.108	0.99854	0.11	60.964	1	492	<.001	
a Predictors: (Constant), SAS										
ANOVAa										
Model		Sum of Squares	df	Mean Square	F	Sig.				
1	Regression	60.785	1	60.785	60.964	<.001b				
	Residual	490.56	492	0.997						
	Total	551.346	493							
a Dependent Variable: EI										
b Predictors: (Constant), SAS										
Coefficientsa										
Model		Unstandardized Coefficients		Standardized	t	Sig.				
		B	Std. Error	Beta						
1	(Constant)	1.903	0.212		8.973	<.001				
	SAS	0.437	0.056	0.332	7.808	<.001				
a Dependent Variable: EI										

Table 10.9. Simple linear regression analysis results of the dummy variable and EI for both the 2020 and 2021 samples (combined data set)

Model Summary										
Model	R	R Square	Adjusted R Sq	Std. Error of t	Change Statistics					
					R Square Char	F Change	df1	df2	Sig. F Change	
1	.128a	0.016	0.015	1.04576	0.016	8.88	1	530	0.003	
a Predictors: (Constant), 0=2020 1=2021 Dummy										
ANOVAa										
Model		Sum of Squares	df	Mean Square	F	Sig.				
1	Regression	9.712	1	9.712	8.88	.003b				
	Residual	579.617	530	1.094						
	Total	589.329	531							
a Dependent Variable: EI										
b Predictors: (Constant), 0=2020 1=2021 Dummy										
Coefficientsa										
Model		Unstandardized Coefficients		Standardized	t	Sig.				
		B	Std. Error	Beta						
1	(Constant)	3.629	0.06		60.206	<.001				
	0=2020 1=2021	-0.273	0.091	-0.128	-2.98	0.003				
a Dependent Variable: EI										

Table 10.10. Simple linear regression analysis results of the dummy variable and ATB for both the 2020 and 2021 samples (combined data set)

Model Summary									
Model	R	R Square	Adjusted R Sq	Std. Error of t	Change Statistics				
					R Square Char	F Change	df1	df2	Sig. F Change
1	.138a	0.019	0.017	0.82502	0.019	10.313	1	528	0.001
a Predictors: (Constant), 0=2020 1=2021 Dummy									
ANOVAa									
Model		Sum of Squares	df	Mean Square	F	Sig.			
1	Regression	7.02	1	7.02	10.313	.001b			
	Residual	359.384	528	0.681					
	Total	366.404	529						
a Dependent Variable: ATB									
b Predictors: (Constant), 0=2020 1=2021 Dummy									
Coefficientsa									
Model		Unstandardized Coefficients		Standardized	t	Sig.			
		B	Std. Error				Beta		
1	(Constant)	3.82	0.048		80.072	<.001			
	0=2020 1=2021 Dummy	-0.232	0.072	-0.138	-3.211	0.001			
a Dependent Variable: ATB									

Table 10.11. Simple linear regression analysis results of the dummy variable and SN for both the 2020 and 2021 samples (combined data set)

Model Summary									
Model	R	R Square	Adjusted R Sq	Std. Error of t	Change Statistics				
					R Square Char	F Change	df1	df2	Sig. F Change
1	.164a	0.027	0.025	0.95476	0.027	14.497	1	526	<.001
a Predictors: (Constant), 0=2020 1=2021 Dummy									
ANOVAa									
Model		Sum of Squares	df	Mean Square	F	Sig.			
1	Regression	13.215	1	13.215	14.497	<.001b			
	Residual	479.482	526	0.912					
	Total	492.697	527						
a Dependent Variable: SN									
b Predictors: (Constant), 0=2020 1=2021 Dummy									
Coefficientsa									
Model		Unstandardized Coefficients		Standardized	t	Sig.			
		B	Std. Error				Beta		
1	(Constant)	3.48	0.055		62.811	<.001			
	0=2020 1=2021 Dummy	-0.319	0.084	-0.164	-3.807	<.001			
a Dependent Variable: SN									



Table 10.12. Simple linear regression analysis results of the dummy variable and PBC for both the 2020 and 2021 samples (combined data set)

Model Summary									
Model	R	R Square	Adjusted R Sq	Std. Error of t	Change Statistics				
					R Square Char	F Change	df1	df2	Sig. F Change
1	.088a	0.008	0.006	0.86523	0.008	4.116	1	524	0.043
a Predictors: (Constant), 0=2020 1=2021 Dummy									
ANOVAa									
Model		Sum of Square	df	Mean Square	F	Sig.			
1	Regression	3.081	1	3.081	4.116	.043b			
	Residual	392.282	524	0.749					
	Total	395.363	525						
a Dependent Variable: PBC									
b Predictors: (Constant), 0=2020 1=2021 Dummy									
Coefficientsa									
Model		Unstandardized Coefficients		Standardized	t	Sig.			
		B	Std. Error	Beta					
1	(Constant)	3.438	0.05		68.369	<.001			
	0=2020 1=2021	-0.154	0.076	-0.088	-2.029	0.043			
a Dependent Variable: PBC									

Table 10.13. Simple linear regression analysis results of the dummy variable and SAS for both the 2020 and 2021 samples (combined data set)

Model Summary									
Model	R	R Square	Adjusted R Sq	Std. Error of t	Change Statistics				
					R Square Char	F Change	df1	df2	Sig. F Change
1	.008a	0.000	-0.002	0.80504	0	0.03	1	492	0.863
a Predictors: (Constant), 0=2020 1=2021 Dummy									
ANOVAa									
Model		Sum of Square	df	Mean Square	F	Sig.			
1	Regression	0.019	1	0.019	0.03	.863b			
	Residual	318.863	492	0.648					
	Total	318.882	493						
a Dependent Variable: SAS									
b Predictors: (Constant), 0=2020 1=2021 Dummy									
Coefficientsa									
Model		Unstandardized Coefficients		Standardized	t	Sig.			
		B	Std. Error	Beta					
1	(Constant)	3.713	0.048		76.619	<.001			
	0=2020 1=2021	-0.013	0.073	-0.008	-0.172	0.863			
a Dependent Variable: SAS									