



LISBON
SCHOOL OF
ECONOMICS &
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UNIVERSIDADE DE LISBOA

MESTRADO
CIÊNCIAS EMPRESARIAIS

TRABALHO FINAL DE MESTRADO
DISSERTAÇÃO

THE IMPORTANCE OF EMOTIONAL INTELLIGENCE FOR
ENTREPRENEURIAL RISKS

FILIPPE MIGUEL MONTEIRO PEREIRA

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ORIENTAÇÃO:

NUNO JOEL GASPAR FERNANDES CRESPO

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ABSTRACT

Emotional intelligence has its origins on a set of qualities that help an individual to better understand processes, actions and information, allowing him to positively contribute to the social interactions and influencing his behaviour within their environment. Entrepreneurship is seen as a major source of employment and wealth creation and can also be seen as a set of dimensions, behaviours and characteristics that make up a dynamic process known as entrepreneurship. This research proposes to understand how the entrepreneurial potential might be affected by emotional intelligence through the perspective of the theory of planned behaviour, i.e. how motivation and ability leads to better performance. The present research therefore analyses how emotional intelligence can influence an individual's entrepreneurial orientation and their entrepreneurial attitudes. Then it sets out to understand how these attitudes towards entrepreneurship can, in turn, lead to entrepreneurial intent and nascent entrepreneurship, i.e. activities and steps being taken by individuals towards new venture creation.

A questionnaire was designed for master's students of ISEG - Lisbon School of Economics & Management with the purpose of gathering data on the direct relation between emotional intelligence and the orientations and attitudes towards entrepreneurship, highlighting how the aspects of emotional intelligence tend to influence the motivations, behaviours and, in turn, performance. Our research concluded that emotional intelligence positively effects entrepreneurial orientation and the attitudes towards entrepreneurship, which in turn positively affect entrepreneurial intent and leads to nascent entrepreneurship. The results also show that the existence of an entrepreneurial role model within the friends of the respondents strengthens the relationships that emotional intelligence and entrepreneurial orientation have with attitudes towards entrepreneurship.

Keywords: Emotional intelligence; Personality characteristics; Entrepreneurship; Entrepreneur's characteristics; Theory of planned behaviour.

RESUMO

A inteligência emocional tem origem num conjunto de qualidades que ajudam um indivíduo a perceber melhor processos, ações e informação, que o levam a contribuir positivamente nas interações sociais e influenciam o seu comportamento no ambiente social em que se insere. O empreendedorismo é visto como uma grande fonte de emprego e criação de riqueza, podendo ser definido como um conjunto de dimensões, comportamentos e características que completam um processo dinâmico conhecido como empreendedorismo. A presente investigação pretende compreender de que modo o potencial empreendedor pode ser afetado pela inteligência emocional do indivíduo, quando se olha pela perspectiva da teoria do comportamento planeado, i.e., de que modo a motivação e as capacidades geram melhor desempenho. A investigação aqui apresentada pretende analisar de que modo inteligência emocional pode influenciar a orientação empreendedora do indivíduo e as suas atitudes empreendedoras. De seguida pretende-se perceber de que modo as atitudes para o empreendedorismo influenciam as intenções empreendedoras e o empreendedorismo nascente, i.e., atividades e medidas realizadas por indivíduos que têm como objetivo a criação de novos projetos.

Foi realizado um inquérito a alunos de mestrado do ISEG - Lisbon School of Economics & Management, com o objetivo de recolher dados que aferissem a relação direta entre inteligência emocional e as orientações e atitudes empreendedoras do indivíduo, demonstrando como os aspetos da inteligência emocional influenciam as motivações, comportamentos, e por sua vez desempenho. A nossa investigação concluiu que inteligência emocional afeta positivamente a orientação empreendedora e as atitudes para o empreendedorismo, que por sua vez afetam positivamente as intenções empreendedoras, o que leva a empreendedores nascentes. Os resultados mostram ainda que, a existência de um modelo empreendedor no seio dos amigos dos respondentes, tornam mais fortes as relações que a inteligência emocional e a orientação empreendedora têm com as atitudes face ao empreendedorismo.

Palavras-Chave: Inteligência Emocional; Características Pessoais; Empreendedorismo; Características Empreendedoras; Teoria do Comportamento Planeado.

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1 INTRODUCTION

Emotional intelligence competencies have been the target of increased scrutiny, being studied as a precursor for acquiring abilities and behaviours that help individuals better performing in their environment and being able to seize the opportunities others might struggle to attain (Schutte, 2014). Salovey and Mayer (1990) defined emotional intelligence as a type of social and personal intelligence involving the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions. Davies et. al. (1998) present emotional intelligence as a framework consisting of four main dimensions: i) appraisal and emotion in the self - the ability to understand and be sensible to emotions; ii) appraisal and recognition of emotion in others - being able to understand others emotions and being able to predict others emotional responses; iii) regulation of emotions - being able to evaluate and act according to the moods of yourself and others, and finally, iv) use of emotions to facilitate performance - by encouraging yourself and establishing goals towards better performance.

Other authors meanwhile support that cognitive abilities and social skills are directly related with entrepreneurial success (Baron & Markham, 2000;2003). Entrepreneurs can be defined as individuals who change certain conditions in order to create value around perceived opportunities, either within an existing enterprise or in a new venture (Karp, 2006). In past studies, researchers have found a correlation between emotional intelligence's dimensions and the entrepreneurial intentions (Zampetakis et al., 2009; Mortan et al., 2014). For instance, Zampetakis et al. (2009) have found that emotional self-efficacy, proactivity and creativity have considerable utility on attitudes towards entrepreneurship and entrepreneurial intent. Also, Mortan et al. (2014) found that the capacity to regulate and use emotions does affect the success of entrepreneurial activities and the possibility to engage in new businesses.

This research tries to further understand what has been previously studied and ascertain how emotional intelligence can directly influence the several stages of entrepreneurship. The research question that this study will try to answer refers to how emotional intelligence affects entrepreneurial arisal. Our research studies how the influence of emotional intelligence in entrepreneurial orientation and attitudes towards entrepreneurship, and how these affect entrepreneurial intent and nascent

entrepreneurship. To test these hypotheses a questionnaire was designed and distributed by master's students of ISEG – Lisbon School of Economics and Management, University of Lisbon. In the next chapter we will be presenting the literature review providing context to the concepts of emotional intelligence, entrepreneurship and how these two concepts have been studied together. Chapter 3 will present the research model and hypothesis of this study. The following chapter will show the methodology behind the research with regards to the sample, questionnaire design, methods and data collection procedures. Data analysis will be dealt with in chapter 5 and discussions of the findings will be developed in chapter 6. Next, conclusions and implications of the research will also be presented in chapter 6.

2 LITERATURE REVIEW

2.1 Emotional Intelligence

Unlike the recent popularity of entrepreneurship, emotional intelligence has been studied since the early twentieth century, with Edward Thorndike. During the 1920s, his work on social intelligence gave us an insight at measuring social behaviour and linking it to intelligence. Thorndike defined social intelligence as “the ability to perceive one’s own and others’ internal states, motives, and behaviours, and to act toward them optimally on the basis of that information (Salovey & Mayer, 1990, p.187).

The same authors defined the concept of emotional intelligence as the ability to observe and understand other’s emotions as well as their own, which, in turn helps the understanding of people’s thoughts and actions (Salovey & Mayer, 1990; Cooper & Sawaf, 1997; (Salovey, Hsee & Mayer, 1993). The authors also divided emotional intelligence into two main dimensions; intrapersonal intelligence, which allows one to understand the emotions of one’s self; and interpersonal intelligence, which relates to analysing other’s emotions.

More recently Mayer and Salovey (1997), introduced the notion of the “four-branch ability model”. They consider the ability to understand emotions in both, yourself and others. This relates to the understanding of emotions as well as the ability to express them. Those who can understand their emotions and those of others will be more sensitive to what they mean and will predict the responses based on the emotions being expressed

(Scherer et al., 2001). They will also acknowledge their own emotions more easily. Emotions therefore can assist thinking, which in turn allows for knowledge to be created based on previous experiences (Cytowic, 1993; Mayer & Mitchell, 1998). This is why the ability to analyse emotional information will develop over time and make the outcome more understandable (Frijda, 1988; Ortony et al., 1988; Roseman, 1984). Managing your own emotions includes the ability to reshape certain attitudes or assessments, as well as managing your own goals, social awareness and self-knowledge (Mayer & Salovey, 1997; Parrott, 2002).

It is important to note that individuals with high emotional intelligence will require less cognitive efforts in order to solve emotional problems. It will also allow them to pursue social interactions more often, taking up positions such as teaching or administrative tasks as a result of being more agreeable than others. Their objectives, motivations and goals will also be more defined to them. These individuals will avoid disruptive behaviour, which in turn will provide more positive social interactions (Mayer, Salovey & Caruso, 2004).

Emotional intelligence has been linked to several key aspects of social life. Emotional intelligence has been closely linked with leadership. As Gragg (2008) states, “leadership is the art of managing people, including the development of relationships, support, critique, and providing growth opportunities”. Therefore, a good leadership “means develop techniques that rely upon emotional intelligence” (Gragg, 2008, p.242). Goleman (2017) also found that organizational climates with high emotional intelligence will provide trust, information-sharing and learning opportunities; whereas low emotional intelligence will generate fear and anxiety. Studies have also been conducted on how emotional intelligence relates to networking and overall life satisfaction (Schutte, 2014), job performance (Law, et al, 2004) and predicting entrepreneurship (Zampetakis et al., 2009).

Petrides and Furnham (2001) show the distinction between two types of emotional intelligence: ability emotional intelligence and trait emotional intelligence. The first relates with the actual abilities to recognize the information conveyed in the form of emotion. Due to its nature it is necessary to measure ability emotional intelligence through maximum performance tests rather than a self-report test. As for the later, trait emotional intelligence refers to behavioural dispositions and self-perceived abilities (Petrides & Furnham, 2001; Mayer & Salovey, 1997; Bar-on et. al. 2000; Dawda and Hart, 2000;

Shutte et. al, 1998), which is why it is considered a personality trait and not a cognitive ability (Zampetakis, Beldekos & Moustakis, 2009; Eysenck, 1994; McCrae, 1994; Zeidner, 1995), which contrary to ability emotional intelligence is a self-report measure (Bar-On, 1997; Goleman, 1995; Roger & Najarian, 1989; Salovey & Mayer, 1990; Schutte et al., 1998).

Bar-On (2006) introduces a very important model defining emotional intelligence as “a cross-section of interrelated emotional and social competencies, skills and facilitators that determine how effectively we understand and express ourselves, understand others and relate with them, and cope with daily demands” (Bar-on, 2006, p.14). Emotionally intelligent individuals understand and express themselves accurately, understand and relate well with others and be able to deal with daily demands, challenges and pressures. The Bar-on model conceives emotional intelligence as a set of 5 different competencies, each one with its own set of skills.

These competencies can be divided into: i) self-awareness and self-expression; ii) social awareness and interpersonal relationship; iii) emotional management and regulation; iv) change management and v) self-motivation (Bar-on, 2006). Self-awareness can be described as the ability to understand your emotions and express them accurately. This enables people rely on the control of their own emotions as a way of achieving personal goals and their full potential. Interpersonal abilities (second competence), meanwhile, refers to the interaction with others. This mainly refers to understanding and being aware of other’s feelings, identifying other people’s social group and being relatable and work well with others. This is key in establishing relationships (third competence). An emotionally intelligent individual has to be able to manage their emotions. This may suggest being able to manage and tolerate stress or the ability to control one’s emotions and impulses. For the fourth competence, Bar-on (2006) states that adapting to change is essential in studying emotional intelligence. It is necessary to look at one’s feelings and emotions and validate them by observing them from a third person’s perspective, i.e. what the author calls reality-testing. This allows to be adaptable and able to adjust the emotions and one’s thinking according to new situations, thus assisting in problem-solving. Finally, the author states that a positive and happy outlook on life (fifth competence) and the relationship with others also contributes for one’s emotional intelligence (Bar-on, 2006).

Davies, et. al. (1998) also present a framework, that according to Law et.al. (2004), has minor differences to the “four branch ability model” seen above, also presenting four dimensions that are considered of primary importance for the definition of emotional intelligence (Davies, et. al, 1998). The first aspect is defined as appraisal and expression of emotion in the self. This dimension measures the awareness of the mood and the thoughts being conveyed (Mayer & Stevens, 1994; Swinkels & Giuliano, 1995). According to the authors, this allows yourself to notice the feelings, describe and evaluate them (Davies, et. al, 1998). Law et. al. (2004) postulate that one’s ability to understand their deep emotions facilitates the ability and sensibility to acknowledge their emotions better than most people.

The next dimension addresses the appraisal and recognition of emotion in others. It looks into the ability to understand the emotions of others, which makes understanding the feelings of others and makes it easier to predict emotional responses from others (Law et. al, 2004). Davies et. al. (1998) state that people who suffer from alexithymia (the inability to evaluate and verbally express one’s emotions) not only have a difficult time identifying other’s emotions but are also unable to reexperience those emotions in themselves, which suggests a close link to empathy (Bagby, Taylor & Parker, 1994; Nemiah, Freyberger & Sifneos, 1976; Taylor, Bagby & Parker, 1997). The authors end up suggesting that, because of this, being able to evaluate one’s feelings and those of others may be something inseparable.

The third dimension proposed by Davies et. al. (1998) concerns with the ability to regulate the emotions in the self and in others. The authors propose that the exercise of regulating one’s emotions refers to being able to monitor, evaluate and act to change that mood. Being able to regulate emotions refers to act on reducing unpleasant moods and maintaining pleasant ones. Being able to control others’ temper in distressed individuals is also something this dimension addresses, although the authors admit this is difficult to be analysed (Davies et. al, 1998).

The final dimension relates to the use of emotions to facilitate performance. This relates with being able to use emotions with a particular objective in mind. For Law et. al. (2004), someone who is capable of using emotions constructively towards personal performance is able to encourage themselves to always do better and be more productive. Law et. al. (2004) felt these dimensions are a very good representation of the emotional

intelligence's literature and equates well with Mayer and Salovey's (1997) proposition as well as Ciarrochi et. al. (2000) four main areas of emotional intelligence.

2.2 Entrepreneurship

In today's modern economy, the role of the entrepreneur is critical, as it increases economic efficiency, market innovation and, also, creates employment (Zhao et al, 2005; Levenburg, Schwarz, 2008; Baumol, 1990). In the United States, small businesses, which are more likely to be newer firms, are more innovative than larger firms and are seen as the major source of employment growth, especially in new economic sectors such as information technology (Reynolds, et al, 2004). Previous research shows several theories that define what means to be an entrepreneur. Entrepreneurship has been defined as the dynamic process of creating incremental wealth (Hisrich, et al, 2005). There is, however, a consensus that we need to look at a collection of dimensions, behaviours and attitudes that impact entrepreneurship (Bird 1988; Katz and Gartner 1988; Shaver and Scott 1992).

Schumpeter's work is identified as pioneering, introducing the notion of the entrepreneur as an individual that takes upon himself to innovate and introduce new products, management and organizations (Karp, 2006; Risker, 1998). According to Schumpeter (1934), entrepreneurship is central to development in local, regional and national economies. Risker (1998) states that Schumpeter's work and his definitions were used by authors to explain innovation from the entrepreneur's point of view (Shapiro & Sokol, 1982; Carland et. al, 1984). The act of identifying opportunities by applying motivation, intentions, experiences and resources to future perspectives leads to the entrepreneurial process as a behaviour (Karp, 2006; Hytti, 2005).

Lumpkin & Dress (1996) looked into the entrepreneurial problem introduced by Miles & Snow (1978), the strategy used by the entrepreneur when faced with the decision of what opportunities are worth the risk of new ventures. They related this to entrepreneurial orientation, a multidimensional concept which provides an idea of what is the ideal makeup of an entrepreneur (Lumpkin & Dress, 1996). The first dimension, innovativeness is defined as the "predisposition to engage in creativity and experimentation through the introduction of new products/services as well as technological leadership using research and development in new processes" (Rauch et al, 2009, p.763). Schumpeter was the first author to highlight the importance of innovativeness in the entrepreneurial process, as it provided a "dynamic evolution of the

economy” (Lumpkin & Dress, 1996, p.142). The second dimension, risk-taking, involves taking bold, decisive actions and often committing considerable amounts of resources when facing uncertainty. The next dimension, proactiveness, is seen as the ability to anticipate and act on future opportunities ahead of the competition (Venkatraman, 1989) looking at the entrepreneur as a leader and not a follower as far as seizing new opportunities and reactivity. The fourth dimension, competitive aggressiveness, is the desire to outperform competitors by taking decisive and aggressive stands towards market competition and threats. Furthermore, Lumpkin & Dress (1996) stress the importance of being able to challenge industry leaders with unconventional tactics (Cooper et. al., 1986) and understanding the competitor’s weakness (Macmillan & Jones, 1984) as key factors of competitive aggressiveness. Finally, the authors define autonomy and being independent and the ability to independently act towards achieving their goals (Rauch et. al., 2009; Bolton & Lane, 2012; Lumpkin & Dress, 1996).

Entrepreneurial orientation is, according to Bolton & Lane (2012), linked to the attitudes towards entrepreneurship and the propositions by Robinson et. al. (1991), and how attitudes and traits may influence risk-taking abilities and innovativeness (Levenburg and Schwarz, 2008; Macko and Tyszka, 2009). In her definition of entrepreneurial attitudes, Athayde (2009) proposes that achievement, personal control, creativity, leadership and intuition are central for a good understanding of how entrepreneurial potential is measured. This definition varies from Robinson et. al. (1991) as it is more focused towards young students rather than adults. Robinson et. al. (1991) proposes that achievement in business venture growth, innovation, perceived self-control of business outcomes and perceived self-esteem are at the roots of entrepreneurial attitudes.

According to the Athayde (2009), creativity is the main precursor for innovative behaviour, a process that leads to greater economic activity and development. This means that creativity is vital to the enterprising potential. Personal control is also mentioned as “internal locus of control (Furnham, 1990) and measures the extent to which an individual believes they are in control of their life. This leads to a predisposition to act and is a key factor for new venture creation. Achievement orientation has been linked to entrepreneurs through the motivation in setting goals, perseverance and drive in their initiatives. Intuition on the other hand, is associated with the ability to recognize and explore new opportunities and the ability to understand and analyse ambiguity and uncertainty in the environment. Despite Athayde (2009) statement that intuition is not as commonly associated with entrepreneurship when compared to the dimensions above, intuition

provides the capability to process information and understanding intuitive approaches to a given problem. Regarding the last dimension, leadership, entrepreneurs are leaders in their specific setting, their small businesses (Athayde, 2009). If we look at the several key aspects of an individual who is capable of new venture creation, such as trustworthiness, persuasiveness, decision-making, negotiation, self-starting, planning, these are all dimensions an entrepreneur has in common with what a leader is comprised of.

One very important behaviour that makes up the entrepreneurial process is how intentions for an individual impact the decision to become an entrepreneur. Entrepreneurial intentions are defined as behaviours such as needs, values, wants, habits and beliefs (Bird, 1988; Lee & Wong, 2004) that motivate entrepreneurial activity. Krueger et. al. (2000) suggested that strong intentions towards starting a business should eventually result in an attempt and that predicting that behaviour is critical to explain entrepreneurial behaviour (Krueger et. al. 2000).

2.2.1 Nascent Entrepreneurs

Studying the importance of nascent entrepreneurs gives us an insight into whether people who don't have yet a business are ready to start a new business (McGee et. al., 2009). According to the author, nascent behaviour follows intentions. It was found that nascent entrepreneurs display higher self-efficacy when compared to other individuals. In order to understand entrepreneurship, it is necessary to understand the factors that cause its emergence and, among those, how opportunities are detected, how to act upon them or how new organizations are formed (Davidsson & Honig, 2003). The theory of nascent entrepreneur studies the process where individuals start a new business. According to Carter et al. (2003), the reasons why nascent entrepreneurs start a new business is no different from other individuals, such as to be the leader, to achieve something, to earn income or to attain a higher position for itself, a process which is also greatly influenced by the social, political and economic context (Reynolds, et al., 2004).

Entrepreneurial decisions, like other perceptual variables are subjective, making it difficult to understand the results (Arenius & Minniti, 2005). This difficulty in understanding what effects the probability of becoming a nascent entrepreneur was shown by Davidsson & Honig, 2003. They found that nascent entrepreneurs can be more positively affected by propensity to accept risk than human capital, in the form of formal education. Many authors reached the conclusion that new venture creation is a complex

process that often shows no identifiable stages or paths (Liao et. al., 2005; Reynolds, 2007).

2.2.2 Role Models

Role Models, or as Hmieleski and Corbett (2006) present, social models, are close people that are entrepreneurs and may act as a role model influencing individuals' predisposition to become entrepreneurs. Entrepreneurial role models have been associated with higher entrepreneurial self-efficacy as role model influence occurs as a form of experience through observational learning (Bandura, 1982). According to Van Auken et. al. (2006), role models are able to affect entrepreneurial intentions as they may change attitudes and beliefs about their ability to be successful in their own new venture. Scott and Twomey (1988) state the importance of parents as role models and the experience provided can sway a career preference towards entrepreneurship. Similarly, Hmieleski & Corbett (2006) also present parenting model as an opportunity to use this exposure to understand and become an entrepreneur. According to Van Auken et. al. (2006), children of entrepreneurs look at business ownership and self-employment as a better alternative than working for a firm.

2.3 Emotional Intelligence and Entrepreneurship

As we have previously seen, there has been some research on entrepreneurship and in emotional intelligence. The interconnection between these two fields has been heavily linked to how the personality characteristics can affect entrepreneurial behaviour (Santos, et. al., 2013; Zhao et. al., 2010; Herman, 2007). The role that personality traits play in originating entrepreneurship is significantly affected by higher risk propensity (Colin, Hanges & Locke, 2004), higher achievement motivation (Stewart & Roth, 2007) and higher conscientiousness, emotional stability and openness to experience (Zhao, Seibert, 2006). Emotional intelligence has also been able to predict performance outcomes in the same level as IQ and personality factors (O'Boyle et al., 2010; Van Rooy & Viswesvaran, 2004) which led to research on predicting entrepreneurship (Ahmetoglu, et. al., 2011; Zampetakis, et. al., 2009a; Zampetakis, et. al., 2009b; Bahadori, 2012; Humphrey, 2013; Ngah, Salleh, 2015).

Mortan et. al. (2014) looked into how the main dimensions of emotional intelligence (appraisal, expression, regulation and utilization of emotions) are related to

the entrepreneurial intentions. They also looked into the cause and effect of this through the mediation of entrepreneurial self-efficacy and controlling for the influence of personality characteristics. They concluded that, independently from the socio-demographic characteristics and personality traits, individuals who can use and regulate their emotions efficiently are more likely to believe in their success in entrepreneurial activities.

Zampetakis et al. (2009a) have purposed that there is a relationship between emotional intelligence, creativity, proactivity and attitudes towards entrepreneurship and entrepreneurial intent. The value of this research lies in the fact that emotional intelligence is related to entrepreneurial intentions, while having student's creativity and proactivity to mediate the positive effect of emotional intelligence. Ahmetoglu (2011) also found the importance of personality variables in emotional intelligence and its validity in predicting entrepreneurial activities. It was also found that emotional intelligence is highly correlated with innovativeness.

While analysing entrepreneurial behaviour applied to organizations, Bahadori (2012) found that high emotional intelligence in managers affect their entrepreneurial behaviour through their ability of recognizing and exploring opportunities. Furthermore, Zampetakis et. al. (2009b) found that emotional intelligence and entrepreneurial behaviour in organizations are directly related. The fundamental theory of this research is that employees that have high emotional intelligence tend to regulate their emotions better, be more confident and able to control their work environment, leading to higher entrepreneurial intentions. Similarly, Nikolaou & Tsaousis (2002) found that higher self-perceived emotional intelligence leads to higher stress tolerance. It can be concluded that high emotional intelligence allows individuals to regulate their emotions better and, furthermore, allows one to be more proactive and creative, a pathway to entrepreneurial behaviour (Zampetakis, et. al., 2009; Nikolaou & Tsaousis, 2002; Amabile, et. al., 2005).

Rhee and White (2007) also proposed that emotional intelligence contributes to the entrepreneurial mindset, and therefore examine

the way entrepreneurs recognize and develop new opportunities, whether through decision-making skills, problem-solving or self-regulation (Rhee & White, 2007). Their study concluded that entrepreneurs revealed high levels of self-confidence, trustworthiness, achievement orientation, service orientation, empathy, change catalyst

and teamwork. In addition, Chin et. al. (2012) found that understanding theirs and other's emotions encourages entrepreneurs to work well with others.

2.3.1 Theory of Planned Behaviour

The relationship between emotional intelligence and entrepreneurship can be interpreted by using Ajzen's (1991) Theory of Planned Behaviour (TPB), which implies the existence of structural relationships (Liñan & Chen, 2009). As Krueger, Reilly & Carsrud (2000) point out, TPB is an intentions model and can be adapted to consider entrepreneurial activity as intentionally planned behaviour.

Ajzen (1991) introduces the central factor of the theory as an individual's intention to perform a given behaviour. Accordingly, the higher the motivation (intention) along with one's ability (behavioural control), the better the performance will be (Ajzen, 1991). Shapero (1982) adds that the attitude towards acting in a certain way, depends on expectations and beliefs about one's personal impacts of outcomes resulting from the behaviour. If intentions are directly related to the ability to perform and one's attitude has an effect on the outcome resulting from a given behaviour, we can therefore establish a parallel, in relation to the attitudes towards entrepreneurship and entrepreneurial intentions. Robinson et. al. (1991) state that the attitude model of entrepreneurship is connected to the influence of entrepreneurial education and practices, and that attitudes towards innovation, achievement, self-esteem and personal control are influenceable. In this sense, and according to Zampetakis et. al. (2009a), there is a correlation between entrepreneurial attitudes and intentions, as the latter is a key predictor of behaviour and mediator of attitudes towards the act. The behaviour in question means becoming a new venture creator.

The theory is divided in three different predictors that are independent to the determinants of intentions (Ajzen, 1987). The first one is the attitude towards the behaviour which refers to how an individual perceives the behaviour, as being favourable or unfavourable. The second refers to the social pressure to perform a certain way, the subjective norm, which can be seen as the way the literature views and expects an entrepreneur to act in a certain way. An individual's entrepreneurial orientation, as we have seen before is comprised with several dimensions that relate to risk-taking, innovativeness and proactiveness and the indication that if a strong entrepreneurial orientation may lead to the intention of becoming one (Bolton & Lane, 2012). The third

aspect, the perceived behavioural control, refers to the perceived ease or difficulty to perform a given behaviour, based on past experience and perceived obstacles (Ajzen, 1987). Perceived behavioural control subjects the execution of an activity to a factor beyond one's control. The intended behaviours should be therefore "considered goals whose attainment is subject to some degree of uncertainty" (Ajzen, 1987, p.45).

3 CONCEPTUAL MODEL AND RESEARCH HYPOTHESES

3.1 Development of the Model

The conceptual model was built over Ajzen's (1991) Theory of Planned Behaviour, and also takes into consideration the arguments of this prior research. Krueger, Reilly and Carsrud (2000) have used the Theory of Planned Behaviour, stating it as being "consistently robust and replicable paradigms that can be applied in different career preferences" (p.416). The theory proposes, as mentioned earlier the relationship between attitudes, subjective norms, intentions and behaviour.

The awareness regarding the significance of personality characteristics on entrepreneurial research has gained momentum in the last two decades (e.g. Baum, Locke, 2004; Krueger, Reilly, Carsrud, 2000; Lee, Tsang, 2001; Zhao, Seibert, Hills, 2005; Rauch, 2009; Bateman, Crant, 1993). These studies mentioned the relationship of entrepreneurial traits, skills and motivation to new venture growth and research on entrepreneurial intentions and perceived self-efficacy and how these affect business performance and organizational behaviour.

More recently, the lack of research on the relationship between emotional intelligence and entrepreneurial intentions has been linked to an absence of a more integrated approach to the problem, thus making it difficult to understand where increased attention needs to be given in both areas (Mortan, et. al., 2014). Rhee and White (2007) identified that emotional intelligence has yet to be applied to entrepreneurial venture leaders, in the form of emotional competencies in successful young entrepreneurs. According to Hermann et al. (2007), personality traits can significantly influence the decision for new venture creation, thus, Zampetakis et. al. (2009a) proposes that emotional intelligence, creativity and proactivity have a positive relationship towards

entrepreneurial intent. The authors also state the need to investigate which subcomponent of Emotional Intelligence is a better predictor of entrepreneurial behaviour (Zampetakis et. al. (2009a), p.614).

The model aims to determine the relation between emotional intelligence and the individual entrepreneurial orientation and their effectiveness in determining an individual's attitude towards entrepreneurship. The model follows a sequence that, after analysing the attitude, we look into if this translates into an actual intention for an individual to become an entrepreneur and if this also means a nascent behaviour and entrepreneurial action. We present the following model as shown in Figure 1:

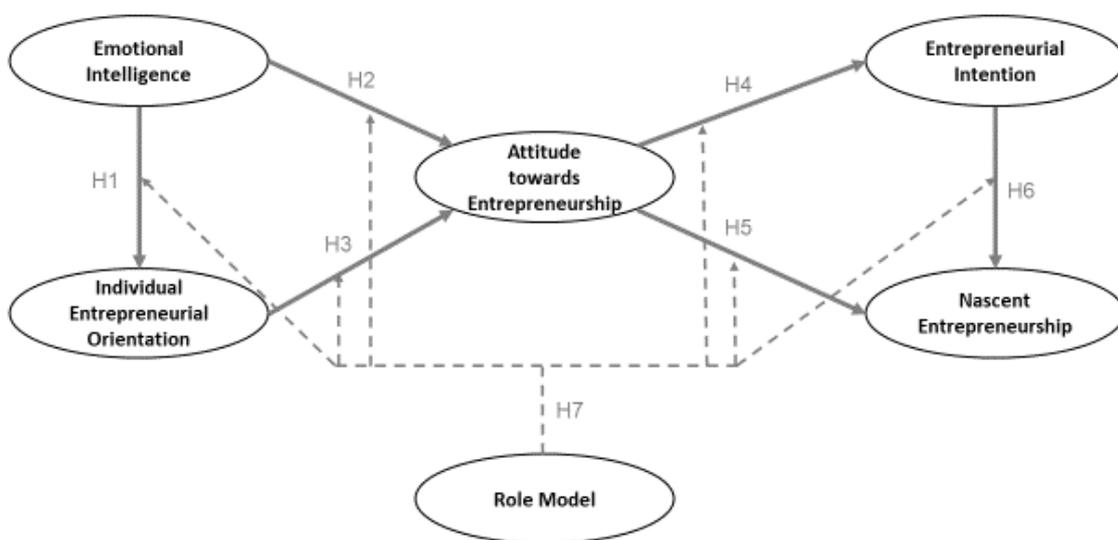


Figure 1 - Conceptual Model

3.2 Research Hypotheses

Our research will focus on understanding the relationship between emotional intelligence and individual entrepreneurial orientation. Bolton & Lane (2012) explored the personal characteristics and attitudes that makes a person prone to engage in entrepreneurial activities. In the midst of the debate whether entrepreneurs are born or made, Levenburg & Schwarz (2008) also state that, characteristics, behaviours and traits are attributed as being key to the entrepreneurial mindset. Zhao et al. (2010) meanwhile, proposes the importance of emotional stability on entrepreneurial intentions. The author states that people with low emotional stability are more prone to feeling stress, being worried and anxious, and also more sensitive to depression and presenting low self-

esteem. These characteristics don't relate well with entrepreneurs as they need to be able to deal with responsibility and heavy workload as well as the stress that may arise from the success or failure of their venture. Furthermore, Pradham & Nath (2012) have found that there is a strong relation between emotional intelligence and entrepreneurial orientation, where self-awareness allows individuals to pursue their goals and achieve better performance. Similarly, Cavallo & Brienza (2002) and Spencer & Spencer (1993) found that emotional intelligence is positively related with achievement orientation, locus of control, risk-taking, innovativeness, self-confidence and extraversion. Based on the research above, we propose the following hypothesis regarding emotional intelligence and entrepreneurial orientation:

H1. Emotional intelligence has a positive effect to one's entrepreneurial orientation.

Zampetakis et al. (2009a) established in their research a link between emotional intelligence and creativity and proactivity, which in turn provide stronger attitudes towards entrepreneurship. An individual's emotional preferences affect the cognitive and affective components that encompass attitudes (Edwards, 1990). Martin-Rojas et. al. (2016) have found in their research that technological competencies can have an effect on entrepreneurial capabilities and better performance. Gohsh & Rajaram (2015) stated that individuals with high emotional maturity and resilience are able understand and manage their emotions, which leads to positive attitudes towards entrepreneurship, effective decision-making and higher risk-taking. Shepherd (2004) also stated that individuals who developed high emotional intelligence are able to manage their stress more efficiently, which also leads to a positive attitude towards entrepreneurship. Therefore, we present the following:

H2. Emotional intelligence has a positive effect on attitude towards entrepreneurship.

In addition to what has been said above, according to Bolton & Lane (2012), entrepreneurial attitudes contribute to one's likelihood of being in a business. The attitudes may change with regards to one's own experience, education and social influences such as impact on one's attitudes towards entrepreneurship through a family business. They establish a direct relation between entrepreneurial orientation and one's attitudes for entrepreneurial activities (Bolton & Lane, 2012). Rauch et. al. (2009) looked into the importance of entrepreneurial orientation towards business performance.

Robinson et. al. (1991) introduced the entrepreneurial attitude orientation scale with the objective of understanding how the dynamic between attitudes and behaviour. Attitudes need connections with other objects as they don't exist isolated (Gasse, 1985; Shaver, 1987). According to the authors, the degree to which attitudes form a pattern indicate the individual's orientation towards an object. With this in mind, we propose the following hypothesis:

H3. An individual's entrepreneurial orientation has a positive effect on one's attitude towards entrepreneurship.

According to Ajzen (1991), the motivation to act in a certain way may be linked to the attitude towards that behaviour. In Krueger's et. al. (2000) research regarding entrepreneurship as a planned behaviour, it was found that attitudes can influence behaviour through effects on intentions. Accordingly, Zampetakis et. al. (2009a) state, that high attitude towards entrepreneurship means that the individual is prone to self-employment. This would mean that one's entrepreneurial intention is higher when his/her attitude towards entrepreneurship is increased. Guerrero et. al. (2006) have also stated that the intention and propensity to act are driving forces towards new venture creations and that intentions are related to attitudes in the perceived desirability and feasibility. Furthermore, Kumara's (2012) research found positive correlation between attitudes towards self-employment and entrepreneurial intention. Thus, we propose the following:

H4. An individual's attitude towards entrepreneurship has a positive effect on one's entrepreneurial intention.

Carter et. al. (1996) describe nascent entrepreneurs as individuals who are willing to start a new business and are involved in specific activities that are make this will possible. These entrepreneurial activities, according to McGee et. al. (2009) range from looking for facilities to investing money, requesting a loan or writing a business plan. Davidsson & Honig (2003) propose that an individual's accumulated knowledge affects the upbringing of nascent entrepreneurs. They also state that the amount of investment in human capital influences not only one's career choices but also the attitudes towards entrepreneurial activity. Ajzen's (1991) Theory of Planned Behaviour looks precisely into how attitudes impact's the behaviour, which in this case is becoming a new venture creator. It is interesting, therefore, to study if the attitude towards entrepreneurship itself is translated to nascent behaviour. We propose the following hypothesis:

H5. An individual's attitude towards entrepreneurship has a positive relation towards a nascent entrepreneurship.

McGee et. al. (2009) studied in their research how entrepreneurial intentions lead to nascent behaviour, which in turn lead to entrepreneurial action. Similarly, Reynolds et. al. (2004) looked into the important steps towards entrepreneurial start-up process and the characteristics of individuals involved in business formation. Carter et. al. (2003) looked into the reasons that comprise a nascent entrepreneur as how one comes to choose new venture creation as a career path. The authors propose that, to start a business, there is an intention to innovate, to be recognized for their achievements and merits as well as the intention for financial success. The research revealed significant influence on entrepreneurial intentions, not only referring to nascent entrepreneurs but also the lack of intention and motivation from non-entrepreneurs. It is possible, on the other hand, for someone to have a high potential to become an entrepreneur but not to consider starting a new venture indicates a lack of entrepreneurial intention. Therefore, the final hypothesis proposes the following:

H6. Entrepreneurial intention has a positive relation towards nascent entrepreneurship.

Finally, focusing on the affect of emotional intelligence on entrepreneurship, the interest on studying how a role model can influence this relation came from the main topic concern of Van Auken, Fry & Stephens (2006). The aim of this research was to ascertain the desire to own a business of students whose role model owned a business. They concluded that role models may affect the entrepreneurial intentions by changing the attitudes and beliefs about the feasibility of a successful new venture (Van Auken, Fry & Stephens, 2006). Austin & Nauta (2016) in their study regarding the entrepreneurial role model exposure as a predictor of women's entrepreneurial intentions also found that greater entrepreneurial intentions are visible not only on students who know a larger number of entrepreneurs but also those who have more frequent intense interactions with entrepreneurs (p.268). The authors attribute this to the importance of learning experiences. However, previous studies did not support the moderating role for the other hypotheses we propose for this research. To understand how role models may have a moderating role on our previous hypothesis, we therefore propose the following:

H7. The existence of entrepreneurial role models will positively influence:

- a. the relation between emotional intelligence and individual entrepreneurial orientation;
- b. the relation between emotional intelligence and attitudes towards entrepreneurship;
- c. the relation between individual entrepreneurial orientation and attitudes towards entrepreneurship;
- d. the relation between attitudes towards entrepreneurship and entrepreneurial intention;
- e. the relation between attitudes towards entrepreneurship and nascent entrepreneurship;
- f. the relation between entrepreneurial intention and attitudes nascent entrepreneurship.

4 RESEARCH METHODOLOGY

The purpose of this chapter is to explain the methodology used in this research. The literature review supports the theoretical framework with the purpose of helping us better understand the relationship between emotional intelligence and entrepreneurial intentions.

We designed a questionnaire based on the Theory of Planned Behaviour to test the hypotheses presented above. This questionnaire was distributed by master students of ISEG - Lisbon School of Economics and Management, University of Lisbon. Instead of selecting students from different study areas and different years, we focused on studying students from the same academic background, in particular, students from the same Institution (ISEG - Lisbon School of Economics and Management). This way we control the diversity of the sample (Mortan et. al., 2014), since samples from different institutions can have specific characteristics that can influence the outcome.

The study applied a quantitative data collection method, allowing us to analyse and gather data more accurately while taking into account what is being measured. An online survey was implemented, considering previously validated scales selected to meet the requirements of this study. According to Wright (2005), an online survey is able to conduct an effectively reach the target audience with the scale that would be difficult to achieve if a face-to-face survey. These surveys take out of the equation conditions where

the respondents would feel hesitant in answering if there was a face-to-face encounter. According to Evans and Mathur (2005), these online surveys also provide an easy way of data entry and analysis with low administration costs.

4.1 Sample

The population of our sample is comprised of students currently attending the master's programs at ISEG - Lisbon School of Economics and Management. The database was obtained from Lisbon School of Economics and Management's Marketing Department, containing a total of 1780 students with access to the school's email address. Our sample contained 192 successfully completed responses from our population, which comprises 10.78% of the population being studied.

4.2 Questionnaire Design

The questionnaire was developed with the purpose of collecting the necessary data to address the objectives of our study. The literature review helped to understand the main areas that needed to be addressed and the relevant measures that needed to be gathered were identified and included in the questionnaire.

The questionnaire was divided into three sections, the first one (Section A) being composed mainly of the personal information of the respondents, such as age, nationality, sex and master's program that the students are attending. The second part (Section B) comprises the individual self-characterization, containing questions related to respondent's emotional intelligence. The third part (Section C) related to questions regarding one's entrepreneurial self-assessment, namely individual entrepreneurial orientation, attitudes towards entrepreneurship, entrepreneurial intentions and nascent entrepreneurs.

4.3 Measures

The variables being used in this study were measured through a 7-point Likert scale, for coherency purposes, with the exception of the personal information of participants and the variable nascent entrepreneur (McGee, et al., 2009). This measure includes a total of 19 task related "yes" or "no" questions, related to the creation of a business adapted from McGee et al. (2009). These are later translated into a score that

indicates the percentage of tasks already implemented by the respondent. Such questions include, for example, “Have you ever prepared a business plan” and “Have you ever organized a team to start a business”

The variable emotional intelligence (16 items) was measured using the scale from Law, et. al. (2004) and was subdivided into four different categories, self-emotions appraisal; others-emotions appraisal; use of emotion and regulation of emotion. A few examples of items are “I really understand what I feel” and “I always set goals for myself and then try my best to achieve them”. The variable individual entrepreneurial orientation (10 items) was measured through the scale used by Bolton & Lane (2012), and comprised of three different dimensions: risk-taking, innovativeness and proactiveness. Items related to these measures include: “I tend to act "boldly" in situations where risk is involved” and “I prefer to try my own unique way when learning new things rather than doing it like everyone else does” The attitudes towards entrepreneurship (18 items) was measured using the scale from Athayde (2009) subdivided into four dimensions: leadership, creativity, achievement and personal control. Examples of items include: “I like taking the lead in projects at school” and “I like to get things off the ground when we’re doing a project”. Entrepreneurial intentions (6 items) was adapted from Krueger et. al. (2012). Items used in this measure include: “I am ready to do anything to be an entrepreneur” and “My professional goal is to become an entrepreneur”. Finally, the items to study the measure Role Models (6 items) was adapted from Hmieleski & Corbett (2006) of which only one was used: “Do you have a close friend that started a business?”. The measures used are showed in Table V (See Appendix IV).

4.4 Data Collection Procedures

As previously mentioned, an online survey is an effective and time-saving way of gathering data regarding the test of our hypotheses. Therefore, a self-completion questionnaire using the LimeSurvey platform was administered online. On a first stage an email containing the invitation to complete the questionnaire with the necessary link (see Appendix 2) was sent to a total of 1780 students on May 30th. As a follow-up measure, two additional reminders were sent to the students (see Appendixes III and IV). The questionnaire was active until July 1st.

4.5 Methods for Data Analysis

We started by loading our data to SPSS and conduct our first analysis and reliability testing. Using of a Cronbach-Alpha testing we were able to see that our variables were all above the desired values ($\alpha > 0.70$) (Hair et. al., 2009). We then used SPSS to analyse our respondents and their personal characteristics. We also used SPSS to further analyse our variables, using different techniques such as factor analysis.

The measurement and structural models were developed through the use of AMOS. We started by analysing the standardized regression weights that gave us the standardized factor loadings as well as the T-Values. It was through the use of these parameters that we were able to determine which variables include in the model, due to the parsimony requirement of the framework. This approach allowed us to achieve the present model.

5 DATA ANALYSIS AND RESULTS

5.1 Sample Analysis

In this section we will use the answers to questions included into Section A of the questionnaire, in order to characterize the respondents.

5.1.1 Characterization of Respondents

As far as the gender distribution of the respondents is concerned, the majority was female, representing 62% of the population, while 38% of the respondents were male. Regarding the nationality, the majority is Portuguese, accounting to 85.4% of the population, while 10.9% of the population is Brazilian. 2.5% of the population has been spread between Angolan, Russian, Chinese and with the nationality of São Tomé. There were two respondents that did not provide an answer to this question. It is possible to see a predominance of Portuguese speaking students, which makes sense as the majority of the master's programs are taught in Portuguese.

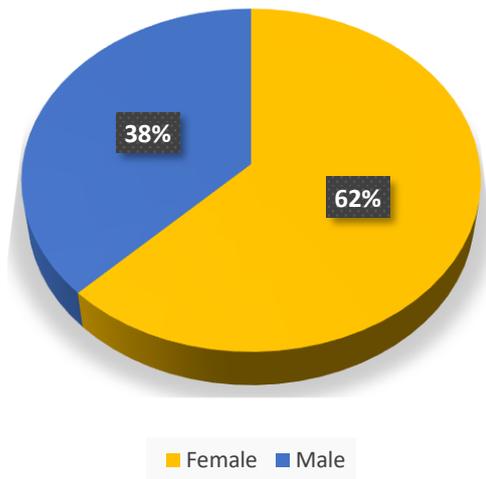


Figure 2 - Gender of Respondents

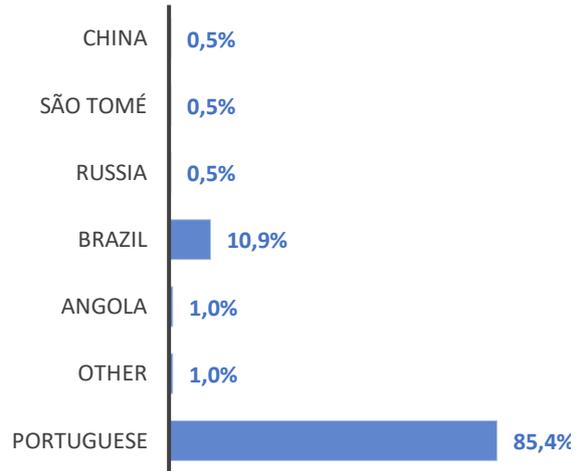


Figure 3 - Nationality of Respondents

In terms of age of the respondents, we aggregated the responses in groups, and it is possible to see that 37% of our population is aged between 21 and 23 years old and more than ¼ of the respondents are aged between 24 and 26 years old. If we look at the combined values of both these groups, plus those aged between 27 and 30, we see that ¾ of our population is in their twenties. We can ascertain that the population attending the master’s programs at the ISEG - Lisbon School of Economics and Management is yet to start or just started a professional career in the business area. The fact that most students are aged between 21 and 23 years old leads us to believe they enrolled in a master’s programs after completing their bachelor’s degree.

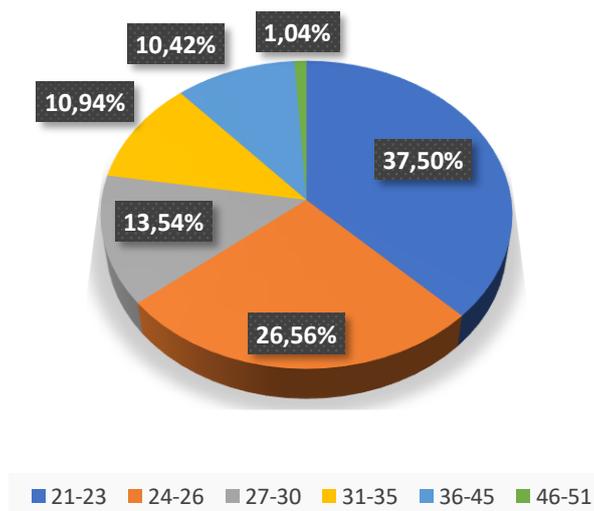


Figure 4 - Age of Respondents

Finally, regarding the Master program in which the respondents are enrolled, we can see that the majority of the population is distributed between four programmes: Corporate Sciences (24.5%); Industrial Management and Strategy (20.3%); Accounting, Taxation and Corporate Finance (12%) and Science, Technology and Innovation Economics and Management (11.5%).

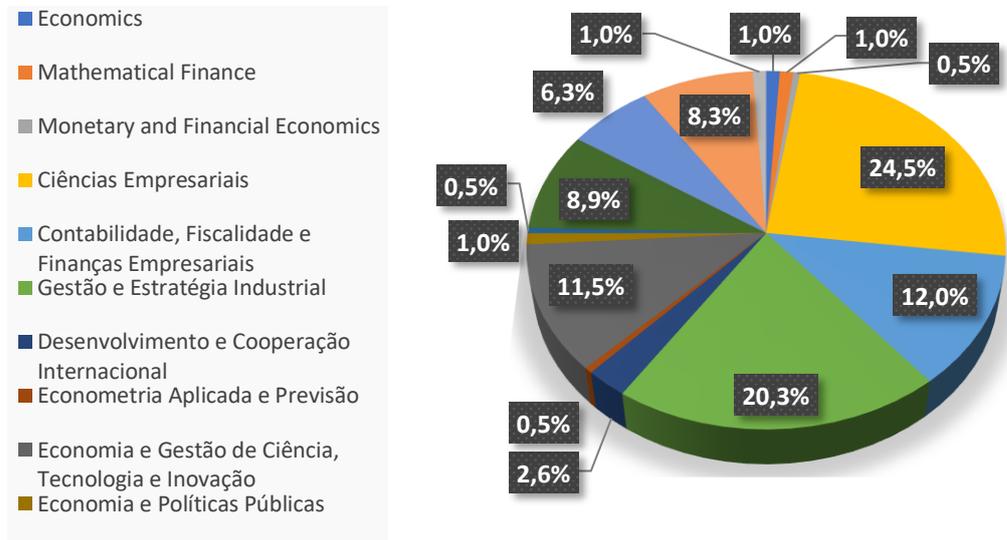


Figure 5 - Master Program

5.2 Initial Data Screening

5.2.1 Missing Values

Our online survey was designed so that all responses were mandatory. Therefore, our final database didn't present any missing values. Upon downloading the responses from the web platform, it was possible to select only the completed questionnaires, leaving out all the unanswered questions.

5.2.2 Descriptive Analysis of Measures

As far as descriptive statistics are concerned, statistic measures were carried out as a way to understand the relation between the items and constructs. The statistics are shown in Table V (See Appendix IV) and are presented as mean, standard deviation, skewness and kurtosis values.

5.2.3 Outliers

In order to check for unengaged responses, i.e. individuals who participated in the questionnaire whose answers indicate lack of engagement by; selecting similar answers throughout the questionnaire, the importance to check for outliers by calculating standard deviation for all the participant's responses regarding the Likert scales (Baumgartner & Homburg, 1996). Since no responses presented a value for standard deviation lower than 0.3, no answers were removed by using this process. Nevertheless, two questionnaires were eliminated as we noticed that the amount of time taken to answer all the survey was less than 2 minutes. Considering that the average response time was 13 minutes, these rapid answers indicated lack of engagement. In some cases, extreme values on a seven-points Likert scale (values such as 1 or 7) may also indicate outliers. We used box-plot graphs to analyse outliers (Kline, 2005), however no answers were excluded as the values were in the range of response.

5.2.4 Normality

The data was also checked for its normality by analysing the skewness and kurtosis of the individual items for each variable included in the study (Tabachnick & Fidell, 2001; Kline, 2005). According to Kline (2005), normality problems arise when skewness index is higher than $|3.0|$ and when the kurtosis index is higher than $|10.0|$. All the values for our items are within the limits for skewness, where the highest value is -0.238 and the lowest value is -0.921. As far as the limits for kurtosis are concerned, all items are within the limits, between 1.475 and -0.673. The results can be seen in Appendix IV (Table V).

5.2.5 Non-response Bias

To test non-response bias, the responses of the early 75% respondents and the responses of the last 25% respondents were compared taking both, the variables included in the model and also some demographic characteristics of the respondents. No problems within the variables were verified, since the values are similar between these two subgroups.

5.2.6 Common-method Bias

As far as the control-method bias, the Harman's one-factor test was used in all of the variables used in this research. Since none of our factors explained the majority of the variance by itself (50%), the results showed no major problems. A total of 14 factors presented Eigenvalues higher than 1, where the first factor accounted for a variance of 23.9% and all 14 factors accounted for a total variance of 75.1%. The results can be seen in Appendix V (Table VI)

5.3 Assessment of Measurement Model

5.3.1 Convergent Validity

According to several authors (Bagozzi & Yi, 1988, 2012; Garver & Mentzer, 1999), in order to assess the convergent validity, the items of the constructs included in the conceptual model should load above 0.60 to 0.70. All the constructs and items are higher than the recommended thresholds, meaning there is a convergent validity. The lowest item was 0.603 for an item concerning attitudes towards entrepreneurship and the highest was 0.979 for an item related to core entrepreneurial intent. The results can be seen in Appendix VI, (Table VII).

5.3.2 Discriminant Validity

To determine the discriminant validity of our model, we used the average variance extracted (AVE) for all constructs used. According to Fornell & Larcker (1981), the values should be above 0.50. In the case of the constructs included in our research all values fulfil this rule, fluctuating between 0.529 and 0.852. Then, we compared the square root of AVE of each constructs with correlation estimate (r) between that particular construct and all the others included in the model. This is done in order to confirm the discriminant validity of our constructs, where the square root of AVE estimates are supposed to indicate higher values than the correlation estimates. This way, the variable in question must be able to account for its own variables better than the other variables being studied (Hair et. al., 2009; Ping, 2004). All constructs present higher square root values of AVE, when compared to the other constructs. The results can be seen in Appendix VII (Table IX).

5.3.3 Reliability

To understand the reliability of our model, the composite reliability and Cronbach's alpha coefficients were analysed for all the measures. The threshold for both these indicators is 0.70 (Nunnally, 1978; Hair et al., 2009). The lowest values are presented by personal control ($\alpha=0.68$ and $CR=0.70$), one of the dimensions of attitudes towards entrepreneurship, while the highest values were obtained for core entrepreneurial intentions ($\alpha=0.97$ and $CR=0.97$). Even though the value of composite reliability of personal control is below the cut-off value, this is a dimension of a second-order construct (attitudes towards entrepreneurship), that did not show any problems regarding the convergent and discriminant validity. Therefore, it was decided to maintain the dimension. The results can be seen in Appendix VI (Table VIII).

5.3.4 Overall Fit

To measure the overall fit of our measurement model an analysis of the goodness-of-fit was carried out. To understand if the model fits our data, we analysed the chi-square (χ^2) that evaluates the overall fit of our model, where the p-value should not exceed 0.05 or 0.10 (Bagozzi & Yi, 1988). We also used the normed chi-square (χ^2/df) adjusting chi-squared by its degrees of freedom, where the values should range from less than 2.0 to between less than 3.0 (Hair et al., 2009; Iacobucci, 2010; Kline, 2005) In our research, the $\chi^2=1133.969$ with a P-value=0.000 and $\chi^2/df= 1.378$.

The Rot Mean Square Error of Approximation (RMSEA) was also carried out to measure the amount of error and approximation per model degree of freedom, not exceeding 0.05-0.06 (Bagozzi & Yi, 2012; Hair et al., 2009). Our model presents a $RMSEA=0.044$. The Goodness-of-Fit index (GFI) indicates the quantity of variance and covariance of the model, where our model gives us a GFI value of 0.951, where values range from 0.0 to 1.0 (Bagozzi & Yi, 1988; Diamantopoulos & Sigauw, 2000). The Parsimony Goodness-of-Fit Index (PGFI) considers the complexity of the model based on the Goodness-of-Fit index and adjusting for loss of degrees of freedom. Values should be higher than 0.50 (Diamantopoulos & Sigauw, 2000; Mulaik et al., 1989), where our model presents a PGFI of 0.826.

As far as the incremental fit indexes are concerned, the Normed Fit Index (NFI) estimates how the χ^2 value of the hypothesized model and the χ^2 value of the null model

relate to each other. Our model presents an NFI of 0.842, the values should be above 0.90 (Bagozzi & Yi, 1988; Diamantopoulos & Siguaw, 2000; Hair et al., 2009). The Comparative Fit Index (CFI) on the other hand looks at the comparison between the hypothesized model and a simple version of the model (Iacobucci, 2010). Our model shows a CFI of 0.818, the values should be between 0.0 to 1.0, where there is a limit equal to or greater 0.90 (Hair et al., 2009). The Incremental Fit Index (IFI) compares the fit of two models to the same data in which variables are uncorrelated. Its limit is also equal to or greater than 0.90 (Byrne, 2013), our model shows a value of 0.951. The table below shows the goodness-of-fit for the measurement model, representing values within the range of a good fit for our model:

Table I - Goodness-of-fit for the measurement model

χ^2	1133.969 (p=0.000)
df	823
χ^2/df	1.378
RMSEA	0.044
GFI	0.95
PGFI	0.83
NFI	0.84
CFI	0.82
IFI	0.95

5.4 Assessment of Structural Model

5.4.1 Overall Fit

For this research, we also analysed the goodness-of-fit indexes for the structural model. The majority values shown in the table below are within the limits of what is considered a good fit:

Table II - Goodness-of-fit for the structural model

χ^2	1331.913 (p=0.000)
df	885
χ^2/df	1.505
RMSEA	0.051

GFI	0.93
PGFI	0.87
NFI	0.81
CFI	0.80
IFI	0.93

5.5 Results

With the present conceptual model, we were able to identify that five from six of the hypotheses testing direct relationships between the five variables included in the model are actually confirmed. It was also possible to confirm the relevance of role models as moderating some of these direct relationships. As we can see from the model below, all the variables that have been identified are related to each other (emotional intelligence, individual entrepreneurial orientation, attitudes towards entrepreneurship, entrepreneurial intention, nascent entrepreneurs and role models). The variables included in the model explain 42.0% of the observed variance of individual entrepreneurial orientation, 63.5% of attitudes towards entrepreneurship, 29.2% of core entrepreneurial intentions and 8.6% of nascent entrepreneurship.

We can, however, see that having attitudes towards entrepreneurship shows no relation in determining if an individual is a nascent entrepreneur ($\beta=0.163$, n.s.), thus hypothesis H5 is not significant. Furthermore, role models are only a good moderator of the relationship between emotional intelligence and attitudes towards entrepreneurship and also, between individual entrepreneurial orientation and attitudes towards entrepreneurship. This variable does not moderate the other relations we have studied.

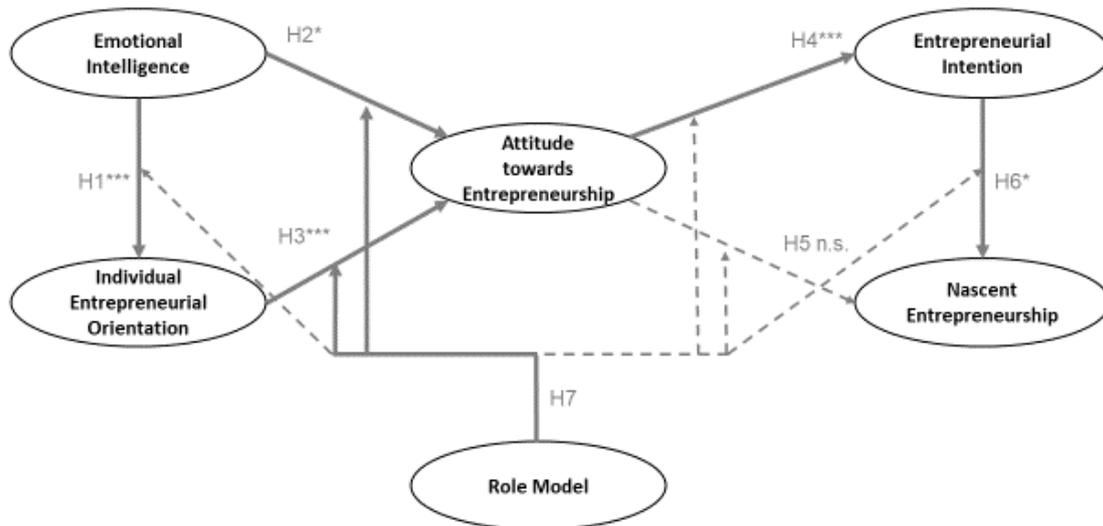


Figure 6 - Structural Model

If we start by looking at our hypothesis H1, we can see that the higher the emotional intelligence of an individual, the higher is an individual's entrepreneurial orientation. The positive and significant relation between these two ($\beta=0.650$, $p<0.001$) supports our hypothesis H1.

Likewise, considering the relation between emotional intelligence and the attitudes towards entrepreneurship, we can see that the higher one's emotional intelligence is, the more attitude towards entrepreneurship one has, which means our estimate is positive and significant ($\beta=0.293$, $p<0.05$), supporting hypothesis H2.

Analysing the relationship between individual entrepreneurial orientation and the attitude towards entrepreneurship, we also see that they are positively correlated and significant ($\beta=0.575$, $p<0.001$), meaning that the higher one's entrepreneurial orientation is, the more attitudes towards entrepreneurship one has, thus supporting our hypothesis H3.

Regarding the relationship between the attitudes towards entrepreneurship and the core entrepreneurial intent, we can see a strong correlation ($\beta=0.540$, $p<0.001$), which means hypothesis H4 is supported. Finally, we can also see that when it comes to the significance of core entrepreneurial intent, its relation is positive and significant to the nascent entrepreneur ($\beta=0.172$, $p<0.05$), thus supporting hypothesis H6.

Table III - Structural model results

Path	Estimate	SE	T-Value	r ²	Hyp	Result
Emotional Intelligence> Individual Entrepreneurial Orientation	0.650	0.223	4.636	42%	H1	***
Emotional Intelligence> Attitudes Towards Entrepreneurship	0.293	0.143	2.402	63.5%	H2	0.016(*)
Individual Entrepreneurial Orientation> Attitudes Towards Entrepreneurship	0.575	0.1	4.241		H3	***
Attitudes Towards Entrepreneurship> Core Entrepreneurial Intent	0.540	0.32	5.213	29.2%	H4	***
Attitudes Towards Entrepreneurship> Nascent Entrepreneur	0.163	0.045	1.739	8.6%	H5	0.082ns
Core Entrepreneurial Intent> Nascent Entrepreneur	0.172	0.013	1.999		H6	0.046(*)

Note: *** p<0.001; ** p<0.01; * p<0.05

As far as the moderation of role models is concerned, to understand the strength of the hypothesis, a multi-group analysis was carried out. A comparison between the relations of the hypotheses being studied without the impact of role models and the relations of the hypothesis with the impact of role models was created. We used a multi-group analysis for these (See table IV) to understand if the differences, using χ^2 , in the relationships being modelled are statistically significant across groups (Crespo, Belchior, Costa, 2018). At first, the unconstrained model was tested, and it exhibited the following values: $\chi^2=2802.21$, $df=1770$. Then, the fully constrained model was tested, and the results were: $\chi^2=2815.66$, $df=1776$. These results show a significant difference between having the impact of role model and its absence.

Table IV - Multi-group analysis

Description	χ^2	df	$\Delta\chi^2$	Δdf	Statistical Significance	Hyp.	Conclusion
Unconstrained Model	2802.21	1770	-	-			
Fully Constrained Model	2815.66	1776	13.45	6	*		
Partially Constrained Model A: EI » Ind. Ent. Orient.	2804.18	1771	1.94	1	n.s.	H7a	
Partially Constrained Model B: EI » ATE	2807.01	1771	4.78	1	*	H7b	Partially Supported
Partially Constrained Model C: Ind. Ent. Orient. » ATE	2810.19	1771	7.95	1	*	H7c	Partially Supported
Partially Constrained Model D: ATE » Ent. Intent	2802.66	1771	0.43	1	n.s.	H7d	
Partially Constrained Model E: ATE » Nascent Ent.	2802.36	1771	0.12	1	n.s.	H7e	
Partially Constrained Model F: Ent. Intent. » Nascent Ent.	2802.43	1771	0.19	1	n.s.	H7f	

Note: * p<0.05

Then, we started testing the partially constrained models. We started by testing the impact of role models on the positive influence emotional intelligence has on individual entrepreneurial orientation (H7a). The model fit for this test shows $\chi^2=2804.18$, $df=1771$, showing that this hypothesis is not significantly different from the unconstrained model ($\Delta\chi^2=0.14$; $\Delta df=1$; $p=0.164$), thus not supporting H7a. Testing the impact of role models on the positive influence of emotional intelligence on the attitudes towards entrepreneurship (H7b), the hypothesis shows $\chi^2=2807.01$, $df=1771$, showing some higher impact than in the constrained model ($\Delta\chi^2=4.78$; $\Delta df=1$; $p=0.029$), supporting H7b. Our hypothesis has also shown a higher impact than in the constrained model $\chi^2=2810.19$, $df=1771$ for the positive influence of individual entrepreneurial orientation on the attitudes towards entrepreneurship ($\Delta\chi^2=7.95$; $\Delta df=1$; $p=0.005$), thus partially supporting H7c. As far as the remaining hypotheses (H7d, H7e, H7f), table IV shows no significant impact when compared to the unconstrained model, similar to what we have seen in H7a, which tells us that the impact of role models is not significant for those relationships.

6 DISCUSSION OF FINDINGS

In this chapter the findings of our present study will be discussed while comparing and contrasting its results with the theoretical background of this field of research and the conceptual framework initially developed. The purpose of our research refers to the understanding of how emotional intelligence affects entrepreneurial intentions and the decision for new venture creation (Mortan, et. al., 2014; Rhee & White, 2007) by developing and testing a conceptual model. This model comprises four variables related to entrepreneurship including attitudes towards entrepreneurship, individual entrepreneurial orientation, entrepreneurial intent and nascent entrepreneurship as well as one variable related to emotional intelligence and one moderating variable related to role models. We found that all but one of our hypotheses regarding direct relationships have been supported.

We start by discussing the positive effects of emotional intelligence being analysed in our study. Our findings have shown that the individuals that show higher emotional intelligence also present higher entrepreneurial orientation. This is a very important finding as it shows a direct link between the entrepreneurial orientation and one's emotional intelligence. The relationship between personal characteristics and entrepreneurial activities has been widely studied (Bolton & Lane, 2012; Austin & Nauta, 2016; Santos, Caetano & Curral, 2013) as well as what behaviours and traits are important to the entrepreneurial mindset (Levenburg & Schwarz, 2008). For instance, Santos, Caetano & Curral (2013) include emotional intelligence as a psychological aspect of entrepreneurial intent. The authors' main focus has been mainly which personality characteristics are a good predictor of emotional intelligence - whilst we intended to understand specifically if emotional intelligence is a good predictor of one's Entrepreneurial Orientation.

Our findings have also shown that emotional intelligence has a positive effect on the attitudes towards entrepreneurship. Zampetakis et. al. (2009) have also hypothesized that the two are related, although through the disposition of self-efficacy. Our findings reveal that, despite theories proposing the relationship between emotional intelligence and entrepreneurial self-efficacy (Zampetakis et. al., 2009; Mortan et. al., 2014), it is possible to understand that a higher emotional intelligence in an individual, leads not only to higher entrepreneurial orientation but also to higher attitudes towards entrepreneurship.

Zampetakis et. al. (2009) found that their hypothesis was partially supported by their study, as it was mediated by the disposition to be proactive and creative.

With regards to the positive effect of an individual's entrepreneurial orientation to their attitude towards entrepreneurship, we proposed that if an individual's orientation to be an entrepreneur is strong, then their attitudes towards entrepreneurship would also be strong. We found this to be supported by our research. Robinson et. al. (1991) showed in their study a model that presented attitude as a combination of three reactions, the beliefs and thought one has about an attitude, their positive or negative feeling about, in this case, entrepreneurship, and the behavioural intention and predisposition towards their goal. In their study, this model showed how one's attitudes are influenced by behaviours, thoughts and feelings. Our study attempted to complement Bolton & Lane's (2012) research that used one's own experience and education in relation to attitudes towards entrepreneurship. Having in mind the work of Glasse, 1985; Shaver, 1987, that proposed attitudes form a pattern that indicate the individual's intention, our study supports this theory, showing a positive link between entrepreneurial orientation and attitudes towards entrepreneurship.

The purpose of testing the relationship between attitudes towards entrepreneurship and entrepreneurial intention was to understand how well an individual's attitude towards entrepreneurship influences their intention of following through with the action. Our research showed a positive correlation between the two, which is in line with the conclusion of Zampetakis et. al. (2009), that similarly found a positive relation between entrepreneurial attitudes and intentions. Researchers have found that the relationship between the attitudes towards entrepreneurship and entrepreneurial intentions provides a solid prediction of the entrepreneurial dynamic (Guerrero et. al., 2006; Kumara, 2012), which further strengthens the application of Ajzen's (1991) theory of planned behaviour that links attitudes to behaviour and intentions.

Our research proposed that, using Ajzen's (1991) TPB, it was possible to see how attitudes towards entrepreneurship would directly impact becoming a new venture creator. However, we found no association between attitudes towards entrepreneurship and nascent entrepreneurs. Our results therefore reveal that the attitudes can influence entrepreneurial intention, however, this doesn't mean that attitudes alone are positively related to the activities those who are willing to start a business may be involved in. Nevertheless, our study also shown that an individual's entrepreneurial intention is

positively associated with nascent entrepreneurs, which reinforces the findings by Carter et. al. (2003) and McGee et. al. (2009) that showed a significant influence of the intentions to become an entrepreneur for starting a new business venture. Our research also complements Reynolds et. al. (2004) as, with these findings, it is important to have the right attitudes translating into intentions to become an entrepreneur. Then, those intentions are positively related to actively seeking out starting and developing their own business. Our study shows that, without a clear intent, the right attitudes alone are not successful in getting a future entrepreneur to seek out activities for new venture growth.

In the evaluation on how role models influence masters' students in the relations we mentioned above, our study found that the existence of a role model of a friend influences the relation between emotional intelligence and attitudes as well as entrepreneurial orientation and attitudes. Van Auken, Fry & Stephens (2006) proposed that role models may change the attitudes and beliefs about successful new venture growth. In a different study, Austin & Naulta (2016) also found that learning experiences provided by role models do contribute to greater entrepreneurial intentions. Although we did not test role models as mediators of other relations, we can note that our research partially supports previous findings as it notes the importance of role models in achieving greater attitudes towards entrepreneurship but has limited success in granting greater entrepreneurial intentions and nascent entrepreneurship.

Overall, we found this research to support our conceptual model and provide overall positive and consistent results with previous studies. Next, we will present the main conclusions.

7 CONCLUSIONS, LIMITATIONS AND FURTHER RESEARCH

7.1 Main Conclusions

This study's main goal is to understand the importance of emotional intelligence in the field of entrepreneurial intentions. To answer to the lack of research argued by previous research (Mortan et. al., 2014; Zampetakis et. al., 2009), an in-depth look at the main components of emotional intelligence was taken into account in order to understand

the possible impact this personal characteristic might have on what has been previously been studied about entrepreneurship.

Our research focused on proving the direct impact of emotional intelligence in entrepreneurship through the perspective of the theory of planned behaviour (Ajzen, 1991) which shows how higher motivation along with the individual's ability leads to better performance in a given field. We set out to show that favourable attitudes towards a behaviour combined with the orientation and the emotional intelligence aspect of one's personality has a positive effect on becoming an entrepreneur. It is therefore possible to say that emotional intelligence has a positive impact on entrepreneurial orientation and the attitudes for entrepreneurship leads us to a subsequent impact on the intentions for entrepreneurship. Entrepreneurial intentions, in turn are strongly related to new venture activities being carried out by nascent entrepreneurs. Furthermore, it is also possible to establish the importance of role models in reinforcing the entrepreneurial mindset when it comes to improving one's attitudes towards entrepreneurship.

7.2 Theoretical Implications

The research carried out had in mind the importance of creating an integrated approach that has the objective of allowing the combination of a behavioural conceptual model that clearly states the steps between behaviour, attitudes and pre-dispositions (Ajzen, 1987), with how emotional intelligence is able to directly affect the entrepreneurial behaviour through their attitudes and intentions.

The importance for broadening the area being studied came through the form of how the relationship between the variables can be studied, which has also been the concern of Mortan et. al. (2014). By trying to create a constructive reasoning to the importance of one's personality characteristics being influenced by one's emotional intelligence and how this translates into attitudes and behaviour, we attempted to construct a line of reasoning that evaluates how personality traits, attitudes, intentions and behaviour influence each other and lead to a final objective. Being able to understand the differences between intentions, attitudes and behaviour was key in understanding the final impact of each one of these components as conceptual framework.

This research makes a clear distinction between the different steps towards new venture creation, differences which are able to show a path on the influence of the emotional intelligence on behaviour. In attempting to analyse a more homogenous sample it was possible to focus on the importance of the emotional intelligence developed in young adults who are master's degree students, who aim mainly for a business career, and their pre-disposition towards new venture creation and growth. Therefore, the results being presented in this research shed light not only on the differences among entrepreneurial engagement stages, but also on the personality traits that ultimately contribute to their success.

7.3 Managerial Implications

This research also contributes for entrepreneurs or policy makers, since it understands the complexity of the entrepreneurial process and it focuses on the impact of emotional intelligence in this process. Our research provides an in-depth look into both these fields of study and is very useful for young entrepreneurs who plan to start a new venture as well as for business managers and established entrepreneurs looking to acquire useful knowledge about emotional intelligence and its effect on entrepreneurial behaviour and intentions.

The importance of entrepreneurship has been mentioned by every author in this field of study, as it has been shown to be an extremely important part of U.S. workforce (Austin & Nauta, 2016) as well as being able to create one forth to one third of the variation in economic growth of industrialized countries (Carter et.al., 2003). Attempting to connect the importance of the entrepreneurial framework in the modern-day business world with the behavioural concept of emotional intelligence has been enlightening and very useful as it allows to understand how entrepreneurship as an environmental setting allow for opportunities to display as well as develop emotional intelligence (Shutte, 2014).

Understanding how the dimensions of emotional intelligence help during the very challenging entrepreneurial process is something that this research tried to follow very closely, with the help of the behavioural conceptual model. Overall, combining both these areas of study gave an interesting insight not only from an individual's point of view as well as for new ventures already in business.

7.4 Limitations and Further Research

Our research consisted in understanding how previous research approached emotional intelligence and entrepreneurship and how both areas are able to be combined, thus both areas play a key role in our research. Every research has its limitations. In this case, the sample was limited to students of master's degree from the ISEG - Lisbon School of Business and Economics, but the size of our sample is relatively small. The population also consisted mainly of Portuguese students, it would have been interesting to have a more diverse population and be able to understand if there are any differences in relation to the emotional intelligence quotient but also the entrepreneurial disposition. Having such diverse cultures being studied would also be able to provide a very interesting conclusion if combined with some research on cultural intelligence. Having said this, having a population where the majority of individuals is from a single nationality gave us a good impression of how business and economics master's degree students relate to entrepreneurship and their emotional intelligence quotient.

As far as future research concerns, it is as much important developing entrepreneurial awareness and development programs as it is understanding the impact of emotional intelligence as a behavioural basis not only as a useful tool for entrepreneurship but also for other fields of study. Understanding how training models for both areas are able to effectively develop interest for entrepreneurship may call for further investigation. Being able to understand the impact of cultural intelligence, stress management and the persuasion and communication capacity in the ability to develop entrepreneurial intentions may certainly provide further insights to the development in the entrepreneurial field.

8 REFERENCES

- Ahmetoglu, G., Leutner, F., Chamorro-Premuzic, T. (2011). EQ-nomics: Understanding the relationship between individual differences in Trait Emotional Intelligence and entrepreneurship. *Personality and Individual Differences* 51. 1028–1033.
- Ajzen, I. (1985). From Intentions to Actions: A Theory of Planned Behavior. *Action Control*, 11–39.
- Ajzen, I. (1987). Attitudes, Traits, and Actions: Dispositional Prediction of Behavior in Personality and Social Psychology. *Advances in Experimental Social Psychology*, 20, 1–63.
- Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50, 179–211.
- Ajzen, I. (2002). Perceived Behavioral Control, Self-Efficacy, Locus of Control, and the Theory of Planned Behavior. *Journal of Applied Social Psychology*, 32(4), 665–683.
- Ajzen, I., & Fishbein, M. (1977). Attitude-Behavior Relations: A Theoretical Analysis and Review of Empirical Research. *Psychological Bulletin*, 84(5), 888–918.
- Arenius, P., Minniti, M. (2005), Perceptual Variables and Nascent Entrepreneurship. *Small Business Economics*, 24. 233-247
- Amabile, T. M., Barsade, S. G., Mueller, J. S. and Staw, B. M. (2005) Affect and creativity at work. *Administrative Science Quarterly* 50, 367–403.
- Athayde, R. (2009). Measuring Enterprise Potential in Young People. *Entrepreneurship Theory and Practice*, 33(2), 481–500.
- Auken, H. V., Fry, F. L., & Stephens, P. (2006). The Influence of Role Models on Entrepreneurial Intentions. *Journal of Developmental Entrepreneurship*, 11(2), 157–167.
- Austin, M. J., & Nauta, M. M. (2016). Entrepreneurial Role-Model Exposure, Self-Efficacy, and Women’s Entrepreneurial Intentions. *Journal of Career Development*, 43(3), 260–272.
- Bagby, R. M., Taylor, G. J., & Parker, J. D. A. (1994). The twenty-item Toronto Alexithymia Scale-II. convergent, discriminant, and concurrent validity. *Journal of Psychosomatic Research*, 38, 23-32.
- Bagozzi, R. & Yi, Y. (1988). On the Evaluation of Structural Equation Models. *Journal of the Academy of Marketing Science*, 16, 74-94.
- Bagozzi, R. P., & Yi, Y. (2012). Specification, evaluation, and interpretation of structural equation models. *Journal of the Academy of Marketing Science*, 40, 8-34.

- Bahadori, M. (2012). The Effect of Emotional Intelligence on Entrepreneurial Behavior: A Case Study in a Medical Science University. *Asian Journal of Business Management* 4(1). 81-85.
- Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ: Prentice-Hall.
- Bar-On, R. (2006). The Bar-On model of emotional-social intelligence (ESI). *Psicothema*, 18, 13–25.
- Bar-On, R. (1997). *The emotional intelligence inventory (EQ-I): Technical manual*. Toronto, Canada: Multi-Health Systems.
- Bar-On, R., Brown, J.M., Kirkcaldy, B.D., Thome, E.P., (2000). Emotional Expression and implications for occupational stress: an application of the Emotional Quotient Inventory (EQ-i). *Personality and Individual Differences*, 28, 1107-1118
- Baron, R. A., Franklin, R. J., & Hmieleski, K. M. (2016). Why Entrepreneurs Often Experience Low, Not High, Levels of Stress: The Joint Effects of Selection and Psychological Capital. *Journal of Management*, 42(3), 742–768.
- Baron, R. A., & Markman, G. D. (2000, February). Beyond Social Capital: How Social Skills Can Enhance Entrepreneurs' Success. *Academy of Management*, 14(1), 106–116.
- Baron, R. A., & Markman, G. D. (2003). Beyond social capital: the role of entrepreneurs' social competence in their financial success. *Journal of Business Venturing*, 18, 41–60.
- Baron, R. A., & Markman, G. D. (2005). Beyond Social Capital: How Social Skills Can Enhance Entrepreneurs' Success. *The Academy of Management Executive*, 14(1), 106–116.
- Baron, R. A., & Tang, J. (2008). Entrepreneurs' Social Skills and New Venture Performance: Mediating Mechanisms and Cultural Generality. *Journal of Management*, 35(2), 282–306.
- Bateman, T. S., & Crant, J. M. (1993). The proactive component of organizational behavior: A measure and correlates. *Journal of Organizational Behaviour*, 14, 103–118.
- Baum, J. R., Locke, E. A., & Smith, K. G. (2001). A Multidimensional Model of Venture Growth. *Academy of Management Journal*, 44(2), 292–303.
- Baum, J. R., & Locke, E. A. (2004). The Relationship of Entrepreneurial Traits, Skill, and Motivation to Subsequent Venture Growth. *Journal of Applied Psychology*, 89(4), 587–598.
- Baumgartner, H. & Homburg, C. (1996). Applications of structural equation modeling in marketing and consumer research: A review. *International Journal of Research in Marketing*, 13, 139-161.

- Baumol, W. (1990). Entrepreneurship: Productive, unproductive, and destructive. *The Journal of Political Economy*, 98, 893–921.
- Bird, B. (1988). Implementing entrepreneurial ideas: The case for intentions. *Academy of Management Review*, 13, 442–454.
- Bolton, D. L., & Lane, M. D. (2012). Individual entrepreneurial orientation: development of a measurement instrument. *Education Training*, 54(2/3), 219–233.
- Byrne, B. M. (2013). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. New York: Routledge.
- Carter, N. M., Gartner, W. B., & Reynolds, P. D. (1996). Exploring Start-Up Event Sequences. *Journal of Business Venturing*, 11, 151–166.
- Carter, N. M., Gartner, W. B., Shaver, K. G., & Gatewood, E. J. (2003). The career reasons of nascent entrepreneurs. *Journal of Business Venturing*, 18, 13–39.
- Cavallo, K., & Brienza, D. (2002). *Emotional competence and leadership excellence at Johnson and Johnson: The emotional intelligence and leadership study*. Retrieved from <http://www/eiconsortium.org>
- Chin, S. T. S., Raman, K., Yeow, J. A., & Eze, U. C. (2012). Relationship Between Emotional Intelligence And Spiritual Intelligence In Nurturing Creativity And Innovation Among Successful Entrepreneurs: A Conceptual Framework. *Social and Behavioral Sciences*, 57, 261–267.
- Ciarrochi, J. V., Chan, A. Y. C., & Caputi, P. (2000). A critical evaluation of the emotional intelligence construct. *Personality and Individual Differences*, 28, 539–561.
- Claes, R., Beheydt, C., & Lemmens, B. (2005). Unidimensionality of Abbreviated Proactive Personality Scales across Cultures. *International Association for Applied Psychology*, 54(4), 476–489.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A Global Measure of Perceived Stress. *Journal of Health and Social Behavior*, 24(4), 385–396.
- Collins, C. J., Hanges, P., & Locke, E. A. (2004). The relationship of need for achievement to entrepreneurship: A meta-analysis. *Human Performance*, 17, 95–117.
- Cooper, A.C., Willard, G.E., Woo, C.W. (1986). Strategies of high-performing new and small firms: A re-examination of the niche concept. *Journal of Business Venturing*, 1, 247-260.
- Cooper, R. K., & Sawaf, A. (1997). *Executive EQ: emotion intelligence in leadership and organizations*. New York: Grosset/Putnam.
- Crespo, N. F., Belchior, R., & Costa, E. B. (2018). Exploring individual differences in the relationship between entrepreneurial self-efficacy and intentions: Evidence from Angola. *Journal of Small Business and Enterprise Development*.

- Cytowic, R. E. (1993). *The man who tasted shapes: A bizarre medical mystery offers revolutionary insights into emotions, reasoning, and consciousness*. New York: Putnam.
- Darvishmotevali, M., Altinay, L., & De Vita, G. (2018). Emotional intelligence and creative performance: Looking through the lens of environmental uncertainty and cultural intelligence. *International Journal of Hospitality Management*, 73, 44–54.
- Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, 18, 301–331.
- Davies, M., Stankov, L., & Roberts, R. D. (1998). Emotional Intelligence: In Search of an Elusive Construct. *Journal Of Personality and Social Psychology*, 75(4), 989–1015.
- Dawda, D., Hart, S.D., (2000). Assessing emotional intelligence: reliability and validity of the Bar-On Emotional Quotient-Inventory (EQ-i) in university students. *Personality and Individual Differences*, 28, 797-812
- Diamantopoulos, A & Siguaw, J. A. (2000). *Introducing LISREL: A guide for the uninitiated*. London: Sage.
- Dulewicz, V., & Higgs, M. (2004). Can Emotional Intelligence be developed? *The International Journal of Human Resource Management*, 15(1), 95–111.
- Edwards, K. (1990), “The interplay of affect and cognition in attitude formation and change”, *Journal of Personality and Social Psychology*, 59, 202-16.
- Evans, J. R., & Mathur, A. (2005). The value of online surveys. *Internet Research*, 15(2), 195–219.
- Eysenck, H. J. (1994). Personality and intelligence: psychometric and experimental approaches. In *Personality and Intelligence*, Sternberg, R. J., Ruzgis, P. (eds). Cambridge University Press: New York, 3-31.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18, 39 50.
- Frijda, N. H. (1988). The laws of emotion. *American Psychologist*, 43, 349-358.
- Garver, M. S. & Mentzer, J. T. (1999). Logistics Research Methods: Employing Structural Equation Modeling to Test for Construct Validity. *Journal of Business Logistics*, 20, 33-57.
- Ghosh, N. B., & Rajaram, G. (2015). Developing Emotional Intelligence for Entrepreneurs: The Role of Entrepreneurship Development Programs. *South Asian Journal of Management*, 22(4), 85–100.
- Godwin, J. L., Neck, C. P., & D'Intino, R. S. (2016). Self-leadership, spirituality, and entrepreneur performance: a conceptual model. *Journal of Management, Spirituality & Religion*, 13(1), 64–78.

- Gomez-Mejia, L. R., & Balkin, D. B. (1989). Effectiveness of Individual and Aggregate Compensation Strategies. *Industrial Relations*, 28(3), 431–445.
- Gragg, P. (2008). From Theory to Practice: Operation Emotional Intelligence. *Legal Reference Services Quarterly*, 27(2-3), 241–253.
- Guerrero, M., Rialp, J., & Urbano, D. (2006). The impact of desirability and feasibility on entrepreneurial intentions: A structural equation model. *International Entrepreneurship and Management Journal*, 4(1), 35–50.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2009). *Multivariate data analysis* (7th Ed.). Upper Saddle River, NJ: Prentice Hall.
- Herman, F., Lueger, M., & Korunka, C. (2007). The Significance of Personality in Business Start-Up Intentions, Start-Up Realization and Business Success. *Entrepreneurship and Regional Development*, 19, 227–251.
- Hmieleski, K. M., & Corbett, A. C. (2006). Proclivity for Improvisation as a Predictor of Entrepreneurial Intentions. *Journal of Small Business Management*, 44(1), 45–63.
- Humphrey, R. H. (2013). The Benefits of Emotional Intelligence and Empathy to Entrepreneurship. *Entrepreneurship Research Journal*, 3(3). 287-294
- Hytti, U. (2005) New meanings for entrepreneurs: from risk-taking heroes to safe-seeking professionals, *Journal of Organizational Change Management*, 18(6), pp. 594–611.
- Iacobucci, D. (2010). Structural equations modeling: Fit indices, sample size, and advanced topics. *Journal of Consumer Psychology*, 20, 90-98.
- Karp, T. (2006). The inner entrepreneur: A constructivistic view of entrepreneurial reality construction. *Journal of Change Management*, 6(3), 291–304.
- Katz, J., and Gartner, W. (1988). Properties of emerging organizations. *Academy of Management Review*, 13. 429–441.
- Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd Ed.). New York: Guilford Press.
- Kreueger, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing Models of Entrepreneurial Intentions. *Journal of Business Venturing*, 15, 411–432.
- Levenburg, N. M., & Schwarz, T. V. (2008). Entrepreneurial Orientation among the Youth of India: The Impact of Culture, Education and Environment. *The Journal of Entrepreneurship*, 17(1), 15–35.
- Law, K. S., Wong, C.-S., & Song, L. J. (2004). The Construct and Criterion Validity of Emotional Intelligence and Its Potential Utility for Management Studies. *Journal of Applied Psychology*, 89(3), 483–496.
- Lee, D. Y., & Tsang, E. W. K. (2001). The Effects of Entrepreneurial Personality, Background and Network Activities on Venture Growth. *Journal of Management Studies*, 38(4), 583–602.

- Lee, S.H. & Wong, P.K. (2004). An exploratory study of technopreneurial intentions: A career anchor perspective. *Journal of Business Venturing*, 19(1), 7–28.
- Liao, J., Welsch, H., & Tan, W.-L. 2005. Venture gestation paths of nascent entrepreneurs: Exploring the temporal patterns. *Journal of High Technology Management Research*, 16(1). 1-22.
- Liñán, F., & Chen, Y.-W. (2009). Development and Cross-Cultural Application of a Specific Instrument to Measure Entrepreneurial Intentions. *Entrepreneurship Theory and Practice*, 33(3), 593–617.
- MacMillan, I.C., Jones, P.E. (1984). Designing organizations to compete. *Journal of Business Strategy*, 4. 11-26.
- Macko, A. and Tyszka, T. (2009). Entrepreneurship and risk taking. *Applied Psychology: An International Review*, 58(3). 469-487.
- MacNab, B. R. (2012). An Experiential Approach to Cultural Intelligence Education. *Journal of Management Education*, 36(1), 66–94.
- Marcus, B., Goffin, R. D., Johnston, N. G. and Rothstein, M. G. (2007) Personality and cognitive ability as predictors of typical and maximum managerial performance. *Human Performance* 20(3), 275–285.
- Markley, D. M., Lyons, T. S., & Macke, D. W. (2015). Creating entrepreneurial communities: building community capacity for ecosystem development. *Community Development*, 46(5), 580–598.
- Martín-Rojas, R., Fernández-Pérez, V., & García-Sánchez, E. (2016). Encouraging organizational performance through the influence of technological distinctive competencies on components of corporate entrepreneurship. *International Entrepreneurship and Management Journal*, 13(2), 397–426.
- Matlay, H. (2006), "Researching entrepreneurship and education", *Education + Training*, 48(8/9), 704-718
- Mayer, J. D., & Mitchell, D. C. (1998). Intelligence as a subsystem of personality: From Spearman's g to contemporary models of hot processing. In W. Tomic & J. Kingma (Eds.), *Advances in cognition and educational practice*, 5, 43-75. Greenwich, CT: JAI.
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2004). Emotional Intelligence: Theory, Findings, and Implications. *Psychological Inquiry*, 15(3), 197–215.
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2008, September). Emotional Intelligence: New Ability or Eclectic Traits? *American Psychologist*, 63(6), 503–517.
- Mayer, J. D., & Stevens, A. (1994). An emerging understanding of the reflective (meta-) experience of mood. *Journal of Research in Personality*, 28, 351-373.
- McCrae, R. R. (1994). Openness to experience as a basic dimension of personality. *Imagination, Cognition and Personality*, 13, 39-55

- McGee, J. E., Peterson, M., Mueller, S. L., & Sequeira, J. M. (2009). Entrepreneurial Self-Efficacy: Refining the Measure. *Entrepreneurship Theory and Practice*, 33(4), 965–988.
- Miles, R., Snow, C. (1978). *Organizational strategy, structure and process*. New York: McGraw-Hill.
- Mortan, R. A., Ripoll, P., Carvalho, C., & Bernal, M. C. (2014). Effects of emotional intelligence on entrepreneurial intention and self-efficacy. *Journal of Work and Organizational Psychology*, 30, 97–104.
- Mulaik, S. A., James, L. R., Van Alstine, J., Bennett, N., Lind, S., & Stilwell, C. D. (1989). Evaluation of goodness-of-fit indices for structural equation models. *Psychological Bulletin*, 105, 430-445.
- Nemiah, J., Freyberger, H., & Sifneos, P. E. (1976). Alexithymia: a view of the psychosomatic process. In O. W. Hill, *Modern trends in psychosomatic medicine*, vol. 3 (pp. 430-439). London: Butterworths.
- Ngah, R., Salleh, Z. (2015). Emotional Intelligence and Entrepreneurs' innovativeness towards Entrepreneurial Success: A Preliminary Study. *American Journal of Economics*, 5(2). 285-290.
- Nikolaou, I. and Tsaousis, I. (2002) Emotional intelligence in the workplace. Exploring its effects on occupational stress and organisational commitment. *The International Journal of Organisational Analysis* 10(4), 327–342.
- Nunnally, J. C. (1978). *Psychometric theory* (2nd Ed.). New York: McGraw-Hill.
- Ortony, A., Clore, G. L., & Collins, A. M. (1988). *The cognitive structure of emotions*. Cambridge: Cambridge University Press
- Ostgaard, T. A., & Birley, S. (1996). New Venture and Personal Growth Networks. *Journal of Business Research*, 36, 37–50.
- O'Boyle, E. H., Jr., Humphrey, R. H., Pollack, J. M., Hawver, T. H., & Story, P. (2010). The relation between Emotional Intelligence and job performance. A metaanalysis. *Journal of Organizational Behavior*, 10.
- Padilla-Meléndez, A., Aguila-Obra, A. R., Garrido-Moreno, A. (2013). Perceived playfulness, gender differences and technology acceptance model in a blended learning scenario. *Computers & Education* 63. 306–317.
- Parrott, W. G. (2002). The functional utility of negative emotions. In L. Feldman Barrett & P. Salovey (Eds.), *The wisdom in feeling: Psychological processes in emotional intelligence* 341-359. New York: Guilford.
- Petrides, K. V., & Furnham, A. (2001). Trait Emotional Intelligence: Psychometric Investigation with Reference to Established Trait Taxonomies. *European Journal of Personality*, 15, 425–448.
- Ping, R. A. (2004). On assuring valid measures for theoretical models using survey data. *Journal of Business Research*, 57, 125-141.

- Pradhan, R. K., Nath, P. (2012). Perception of Entrepreneurial Orientation and Emotional Intelligence: A Study on India's Future Techno-Managers. *Global Business Review*, 13(1), 89-108
- Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. (2009, May). Entrepreneurial Orientation and Business Performance: An Assessment of Past Research and Suggestions for the Future. *Entrepreneurship Theory and Practice*, 761–787.
- Rego, A., Sousa, F., Pina e Cunha, M., Correia, A., & Saur-Amaral, I. (2007). Leader Self-Reported Emotional Intelligence and Perceived Employee Creativity: An Exploratory Study. *Creativity and Innovation Management*, 16(3), 250–264.
- Reynolds, P. D. 2007. New firm creation in the United States: A PSED I overview. *Foundations and Trends in Entrepreneurship*, 3(1). 1-150.
- Reynolds, P. D., Carter, N. M., Gartner, W. B., & Greene, P. G. (2004). The Prevalence of Nascent Entrepreneurs in the United States: Evidence from the Panel Study of Entrepreneurial Dynamics. *Small Business Economics*, 23, 263–284.
- Rhee, K. S., & White, R. J. (2007). The Emotional Intelligence of Entrepreneurs. *Journal of Small Business & Entrepreneurship*, 20(4), 409–425.
- Riskier, D. C. (1998). Toward an Innovation Typology of Entrepreneurs. *Journal of Small Business & Entrepreneurship*, 15(2), 27–41.
- Roberts, L. P., & Robinson, P. B. (2010). Home-based Entrepreneurs, Commercial Entrepreneurs and White-collar Workers: A Comparative Study of Attitudes toward Self-esteem, Personal Control and Business Growth. *Journal of Small Business & Entrepreneurship*, 23(3), 333–353.
- Robinson, P. B., Simpson, D. V., Huefner, J. C., & Hunt, H. K. (1991). An Attitude Approach to the Prediction of Entrepreneurship. *Entrepreneurship Theory and Practice*, 15, 13–31.
- Roger, D., & Najarian, B. (1989). The construction and validation of a new scale for measuring emotion control. *Personality and Individual Differences*, 10(8), 845-853.
- Roseman, I. (1984). Cognitive determinants of emotions: A structural theory. In P. Shaver (Ed.), *Review of personality and social psychology*, 5. *Emotions, relationships, and health*. 11-36. Beverly Hills, CA, Sage.
- Russel, R. D., & Russel, C. J. (1992). An Examination of the Effects of Organizational Norms, Organizational Structure, and Environmental Uncertainty on Entrepreneurial Strategy. *Journal of Management*, 18(4), 639–656.
- Salovey, P., Hsee, C., & Mayer, J. D. (1993). Emotional intelligence and the regulation of affect. In D. M. Wegner, & J. W. Pennebaker, *Handbook of mental control* (pp. 258-277). Englewood Cliffs, NJ: Prentice Hall.
- Salovey, P., & Mayer, J. D. (1990). Emotional Intelligence. *Imagination, Cognition and Personality*, 9(3), 185–211.

- Kumara, S. P. A. P. (2012). Undergraduates' Intention Towards Entrepreneurship: Empirical Evidence From Sri Lanka. *Journal of Enterprising Culture*, 20(01), 105–118
- Santos, S. C., Caetano, A., & Curral, L. (2013). Psychosocial aspects of entrepreneurial potential. *Journal of Small Business & Entrepreneurship*, 16(6), 661–685.
- Scherer, K. R., Banse, R., & Wallbott, H. G. (2001). Emotion inferences from vocal expression correlate across languages and cultures. *Journal of Cross-Cultural Psychology*, 32, 76-92.
- Schumpeter, J. A. (1934). *The Theory of Economic Development*. Cambridge, MA: Harvard University Press.
- Schutte, N. S. (2014). Social Environment Contexts of Trait Emotional Intelligence. *Journal of Human Behavior in the Social Environment*, 24(7), 741–750.
- Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Difference*, 15, 167–177.
- Scott, M and D Twomey (1988). The long-term supply of entrepreneurs: students' career aspirations in relation to entrepreneurship. *Journal of Small Business Management*, 26(4). 5–13.
- Shaver, K., and Scott, L. (1992). Person, process, and choice: The psychology of new venture creation. *Entrepreneurship Theory and Practice*, 16.23–45.
- Shepherd, D. A. (2004). Educating entrepreneurship students about emotion and learning from failure. *Academy of Management Learning and Education*, 3(3), 274-287.
- Spencer, L.M. Jr, & Spencer, S. (1993). *Competence at work: Models for superior performance*. New York: John Wiley and Sons.
- Stewart, W. H., & Roth, P. L. (2007). A meta-analysis of achievement motivation differences between entrepreneurs and managers. *Journal of Small Business Management*, 45. 401-421.
- Swinkels, A., & Giuliano, T. A. (1995). The measurement and conceptualization of mood awareness: Monitoring and labeling one's moodstates. *Personality and Social Psychology Bulletin*, 21, 934-949.
- Tabachnick, B. G. & Fidell, L. S. (2001). *Using Multivariate Statistics* (4th Ed.). Boston, MA: Allynand Bacon.
- Taormina, R. J., & Lao, S. K.-M. (2007). Measuring Chinese entrepreneurial motivation: Personality and environmental influences. *International Journal of Entrepreneurial Behaviour & Research*, 13(4), 200–221.
- Taylor, G. J., Bagby, R. M., & Parker, J. D. (1997). *Disorders of affect regulation: alexithymia in medical and psychiatric illness*. UK: Cambridge University Press.

- Tiwari, P., Bhat, A. K., & Tikoria, J. (2017). The role of emotional intelligence and self-efficacy on social entrepreneurial attitudes and social entrepreneurial intentions. *Journal of Social Entrepreneurship*, 8(2), 165–185.
- Van Rooy, D. L., & Viswesvaran, C. (2004). Emotional Intelligence. A meta-analytic investigation of predictive validity and nomological net. *Journal of Vocational Behavior*, 65, 71–95.
- Venkatraman, N. (1989). Strategic orientation of business enterprises: The construct, dimensionality, and measurement. *Management Science*, 35, 942-962.
- Zampetakis, L. A. (2011). The measurement of trait emotional intelligence with TEIQue-SF: An analysis based on unfolding item response theory models. *Research on Emotion in Organizations*, 7, 289–315.
- Zampetakis, L. A., Beldekos, P., & Moustakis, V. S. (2009). “Day-to-day” entrepreneurship within organisations: The role of trait Emotional Intelligence and Perceived Organisational Support. *European Management Journal*, 27, 165–175.
- Zampetakis, L. A., Kafetsios, K., Bouranta, N., & Moustakis, V. S. (2009). On the relationship between emotional intelligence and entrepreneurial attitudes and intentions. *International Journal of Entrepreneurial Behaviour & Research*, 15(6), 595–618.
- Zeidner, M. (1995). Personality trait correlates of intelligence. In *International Handbook of Personality and Intelligence*, Saklfsoske, D. H., Zeidner, M. (eds). Plenum: New York, 299-319.
- Zhou, J., & George, J. M. (2001). When Job Dissatisfaction Leads to Creativity: Encouraging the Expression of Voice. *Academy of Management Journal*, 44(4), 682–696.
- Zhao, H., & Seibert, S. E. (2006). The Big Five personality dimensions and entrepreneurial status: A meta-analytical review. *Journal of Applied Psychology*, 91, 259-271.
- Zhao, H., Seibert, S. E., & Hills, G. E. (2005). The Mediating Role of Self-Efficacy in the Development of Entrepreneurial Intentions. *Journal of Applied Psychology*, 90(6), 1265–1272.
- Zhao, H., Seibert, S. E., & Lumpkin, G. T. (2010, March). The Relationship of Personality to Entrepreneurial Intentions and Performance: A Meta-Analytic Review. *Journal of Management*, 36(2), 381–404.

9 APPENDIXES

9.1 Appendix I: Invitation Email

Assunto: Convite aos alunos de Mestrado do ISEG para participar estudo académico

Caro(a) aluno(a) de Mestrado do ISEG,

Vimos por este meio solicitar a sua colaboração num projecto de investigação no âmbito do qual está a ser elaborada uma tese de mestrado em Ciências Empresariais do ISEG/Universidade de Lisboa.

O principal objectivo deste projecto é estudar a relação entre a inteligência emocional e o nível empreendedor dos alunos de Mestrado.

O sucesso deste projecto passa em grande medida pela cooperação de uma grande quantidade de alunos, pelo que solicitamos que possa preencher um inquérito online, em que a quase totalidade das questões é de resposta múltipla, e que lhe ocupará aproximadamente 10 minutos.

Por favor clique no seguinte endereço e será encaminhado para o inquérito:

<https://entrepreneurship.limequery.com/828969?newtest=Y&lang=pt>

As respostas são estritamente confidenciais e os dados apenas serão utilizados de forma conjunta para fins académicos.

Agradecendo desde já a sua cooperação e o seu tempo,

Com os meus melhores cumprimentos,

Filipe Pereira

filipe.pereira@aln.iseg.ulisboa.pt

9.2 Appendix II: First Reminder Emails

Assunto: Pedido de Resposta a um Inquérito

Caros alunos de GEI, CEMP, EGCT&I

Peço a vossa ajuda na resposta ao inquérito que foi preparado pelo meu orientando Filipe Pereira do Mestrado de CEMP, para ser respondido por alunos de mestrado.

As vossas respostas são muito importantes!

Por favor respondam no link: <https://entrepreneurship.limequery.com/828969?newtest=Y&lang=pt>

Muito obrigado!

Saudações ISEGuianas,

Nuno Crespo

Caro(a) aluno(a) de Mestrado do ISEG,

Vimos por este meio solicitar a sua colaboração num projecto de investigação no âmbito do qual está a ser elaborada uma tese de mestrado em Ciências Empresariais do ISEG/Universidade de Lisboa.

O principal objectivo deste projecto é estudar a relação entre a inteligência emocional e o nível empreendedor dos alunos de Mestrado.

O sucesso deste projecto passa em grande medida pela cooperação de uma grande quantidade de alunos, pelo que solicitamos que possa preencher um inquérito online, em que a quase totalidade das questões é de resposta múltipla, e que lhe ocupará aproximadamente 10 minutos.

Por favor clique no seguinte endereço e será encaminhado para o inquérito:

<https://entrepreneurship.limequery.com/828969?newtest=Y&lang=pt>

As respostas são estritamente confidenciais e os dados apenas serão utilizados de forma conjunta para fins académicos.

Agradecendo desde já a sua cooperação e o seu tempo,

Com os meus melhores cumprimentos,

Filipe Pereira

filipe.pereira@aln.iseg.ulisboa.pt

9.3 Appendix III: Second Reminder Emails

Assunto: Segundo Lembrete - Pedido de Resposta a um Inquérito

Caros alunos de GEI, CEMP, EGCT&I

Peço a vossa ajuda na resposta ao inquérito que foi preparado pelo meu orientando Filipe Pereira do Mestrado de CEMP, para ser respondido por alunos de mestrado.

As vossas respostas são muito importantes!

Por favor respondam no link: <https://entrepreneurship.limequery.com/828969?newtest=Y&lang=pt>

Muito obrigado!

Saudações ISEGuianas,

Nuno Crespo

Caro(a) aluno(a) de Mestrado do ISEG,

Vimos por este meio solicitar a sua colaboração num projecto de investigação no âmbito do qual está a ser elaborada uma tese de mestrado em Ciências Empresariais do ISEG/Universidade de Lisboa.

O principal objectivo deste projecto é estudar a relação entre a inteligência emocional e o nível empreendedor dos alunos de Mestrado.

O sucesso deste projecto passa em grande medida pela cooperação de uma grande quantidade de alunos, pelo que solicitamos que possa preencher um inquérito online, em que a quase totalidade das questões é de resposta múltipla, e que lhe ocupará aproximadamente 10 minutos.

Por favor clique no seguinte endereço e será encaminhado para o inquérito:

<https://entrepreneurship.limequery.com/828969?newtest=Y&lang=pt>

As respostas são estritamente confidenciais e os dados apenas serão utilizados de forma conjunta para fins académicos.

Agradecendo desde já a sua cooperação e o seu tempo,

Com os meus melhores cumprimentos,

Filipe Pereira

filipe.pereira@aln.iseg.ulisboa.pt

9.4 Appendix IV: Descriptive Analysis of Measures

Table V - Descriptive statistics of measures

Variable	Items	Mean	Standard Dev	Skewness	Kurtosis
Emotional Intelligence	Self-Emotions Appraisal it3	5,462	1,045	-0,846	1,004
	Others-Emotions Appraisal it3	5,370	1,012	-0,734	0,782
	Use of Emotion it4	5,245	1,384	-0,611	-0,139
	Regulation of Emotion it4	4,578	1,406	-0,411	-0,405
Individual Entrepreneurial Orientation	Risk-Taking it3	4,431	1,439	-0,305	-0,339
	Innovativeness it4	4,618	1,403	-0,406	0,053
	Proactiveness it3	5,168	1,335	-0,734	0,583
Attitudes Towards Entrepreneurship	Leadership it5	5,153	1,295	-0,644	0,542
	Creativity it3	5,474	1,356	-0,854	0,619
	Achievement it3	4,670	1,468	-0,366	-0,155
	Personal Control it2	4,555	1,466	-0,358	-0,325
Core Entrepreneurial Intentions	-	3,997	1,950	-0,144	-1,120

9.5 Appendix V: Common-method Bias

Table VI - Harman's one factor test

Factor	Eigenvalues	% Variance	Cumulative %
1	16,547	23,981	23,981
2	9,542	13,828	37,81
3	4,146	6,009	43,819
4	3,191	4,625	48,444
5	2,948	4,273	52,716
6	2,526	3,661	56,378
7	2,249	3,26	59,638
8	2,118	3,069	62,707
9	1,832	2,655	65,362
10	1,656	2,4	67,762
11	1,525	2,211	69,972
12	1,312	1,901	71,874
13	1,143	1,656	73,53
14	1,059	1,535	75,065

9.6 Appendix VI: Convergent Validity

Table VII - Measures factor loadings

Measures	Number of Final Items	Loadings	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
Emotional Intelligence					
Self-Emotions Appraisal	3	0,697~0,9	0,855	0,861	0,676
Others-Emotions Appraisal	3	0,841~0,877	0,889	0,891	0,732
Use of Emotion	4	0,668~0,86	0,878	0,880	0,650
Regulation of Emotion	4	0,768~0,9	0,902	0,904	0,702
Individual Entrepreneurial Orientation					
Risk-Taking	3	0,765~0,797	0,825	0,826	0,612
Innovativeness	3	0,747~0,821	0,873	0,875	0,638
Proactiveness	4	0,814~0,9	0,889	0,889	0,728
Attitudes Towards Entrepreneurship					
Leadership	5	0,72~0,853	0,874	0,891	0,622
Creativity	3	0,69~0,769	0,773	0,870	0,529
Achievement	3	0,607~0,86	0,812	0,817	0,603
Personal Control	2	0,651~0,797	0,677	0,702	0,547
Core Entrepreneurial Intentions	6	0,839~0,979	0,973	0,972	0,852

Table VIII - Items factor loadings

Items	Description	Standardized Factor Loadings	T-Values
		Final	
Emotional Intelligence			
Self-Emotions Appraisal ($\alpha=0.86$; AVE=0.68; CR=0.86)			
B1_SQ001	I have a good sense of why I have certain feelings most of the time	0,697	10,538
B1_SQ002	I have good understanding of my own emotions	0,9	13,594
B1_SQ003	I really understand what I feel	0,855	
B1_SQ004	I always know whether or not I am happy*		
Others-Emotions Appraisal ($\alpha=0.89$; AVE=0.73; CR =0.89)			
B1_SQ005	I always know my friends' emotions from their behaviour	0,848	
B1_SQ006	I am a good observer of others' emotions	0,877	14,186
B1_SQ007	I am sensitive to the feelings and emotions of others*		
B1_SQ008	I have good understanding of the emotions of people around me	0,841	13,635
Use of Emotion ($\alpha=0.88$; AVE=0.65; CR =0.88)			
B1_SQ009	I always set goals for myself and then try my best to achieve them	0,668	
B1_SQ010	I always tell myself I am a competent person	0,826	9,856
B1_SQ011	I am a self-motivating person	0,856	10,122
B1_SQ012	I would always encourage myself to try my best	0,86	10,156

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Regulation of Emotion ($\alpha=0.90$; AVE=0.70; CR =0.90)		
B1_SQ013	I am able to control my temper so that I can handle difficulties rationally	0,768
B1_SQ014	I am quite capable of controlling my own emotions	0,9 13,265
B1_SQ015	I can always calm down quickly when I am very angry	0,798 11,579
B1_SQ016	I have good control of my own emotions	0,878 12,942
Individual Entrepreneurial Orientation		
Risk-Taking ($\alpha=0.83$; AVE=0.61; CR =0.87)		
C7_SQ001	I like to take bold action by venturing into the unknown	0,765 10,471
C7_SQ002	I am willing to invest a lot of time and/or money on something that might yield a high return	0,797 10,901
C7_SQ003	I tend to act "boldly" in situations where risk is involved	0,787
Innovativeness ($\alpha=0.88$; AVE=0.64; CR=0.87)		
C7_SQ004	I often like to try new and unusual activities that are not typical but not necessarily risky	0,747 11,291
C7_SQ005	In general, I prefer a strong emphasis in projects that are not typical but not necessarily risky	0,809 12,539
C7_SQ006	I prefer to try my own unique way when learning new things rather than doing it like everyone else does	0,821
C7_SQ007	I favour experimentation and original approaches to problem solving rather than using methods others generally use for solving their problems	0,817 12,701
Proactiveness ($\alpha=0.89$; AVE=0.73; CR=0.89)		
C7_SQ008	I usually act in anticipation of future problems, needs or changes	0,9 14,282
C7_SQ009	I tend to plan ahead on projects	0,842 13,264
C7_SQ010	I prefer to "step up" and get things going on projects rather than sit and wait for someone else to do it	0,814
Attitudes Towards Entrepreneurship		
Leadership ($\alpha=0.89$; AVE=0.62; CR =0.87)		
C1_SQ001	I enjoy talking the class round to my point of view ^a	
C1_SQ002	I usually take the initiative on any project I'm involved in	0,807 12,6
C1_SQ003	I think I can easily carry my classmates with me when I have an idea	0,72 10,837
C1_SQ004	I enjoy talking responsibility for things in the classroom	0,751 11,438
C1_SQ005	I like taking the lead in projects at school	0,853 13,589
C1_SQ006	When we do a school project I'm right there at the centre of things	0,812
Creativity ($\alpha=0.77$; AVE=0.53; CR =0.77)		
C1_SQ007	I believe that a good imagination helps you do well at school	0,769 8,073
C1_SQ008	I enjoy lessons when a teacher tries out different ways of teaching ^a	
C1_SQ009	Being creative is an advantage in lessons	0,69 7,807
C1_SQ010	I like lessons that really stretch my imagination	0,735
Achievement ($\alpha=0.82$; AVE=0.70; CR=0.81)		
C1_SQ011	I have a lot more energy than most people at school	0,607 8,719
C1_SQ012	I like to get things off the ground when we're doing a project	0,86 13,523
C1_SQ013	I'm usually the driving force among my friends	0,834
Personal Control ($\alpha=0.70$; AVE=0.55; CR=0.68)		
C1_SQ014	I like to get on with things in class rather than be taken through step-by-step by the teacher ^a	
C1_SQ015	I usually get on with things in class rather than wait for everyone else	0,651 5,491
C1_SQ016	I don't like lessons where we are left on our own to get on with our work	0,797
C1_SQ017	I prefer to figure things out rather than rely on a teacher to explain everything ^a	
Core Entrepreneurial Intentions ($\alpha=0.97$; AVE=0.85; CR=0.97)		
C6_SQ001	I am ready to do anything to be an entrepreneur	0,839 18,381
C6_SQ002	My professional goal is to become an entrepreneur	0,881 21,018
C6_SQ003	I will make every effort to start and run my own firm	0,933 25,684
C6_SQ004	I am determined to create a firm in the future	0,979 32,222
C6_SQ005	I have very seriously thought of starting a firm	0,959 28,981
C6_SQ006	I have the firm intention to start a firm some day	0,939

Notes: a – This item was deleted during the scale purification process.

9.7 Appendix VII: Discriminant Validity

Table IX - Correlation Matrix and Discriminant Validity

	1	2	3	4	5	6	7	8	9	10	11	12
1 Leadership	0,79											
2 Self-Emotion Appraisal	0,31	0,82										
3 Others Emotion Appraisal	0,43	0,39	0,86									
4 Use of Emotion	0,42	0,48	0,29	0,81								
5 Regulation of Emotion	0,21	0,40	0,26	0,44	0,84							
6 Risk-Taking	0,58	0,26	0,31	0,45	0,34	0,78						
7 Proactiveness	0,59	0,39	0,37	0,45	0,15	0,63	0,85					
8 Innovativeness	0,52	0,39	0,35	0,39	0,23	0,77	0,75	0,80				
9 Core Entrepreneurial Intent	0,42	0,25	0,30	0,33	0,15	0,66	0,52	0,52	0,92			
10 Achievement	0,73	0,42	0,38	0,53	0,22	0,57	0,56	0,55	0,42	0,84		
11 Creativity	0,30	0,12	0,21	0,10	0,20	0,41	0,26	0,47	0,39	0,46	0,73	
12 Personal Control	0,48	0,18	0,30	0,35	0,29	0,54	0,39	0,39	0,42	0,48	0,29	0,74

Note: The boldface scores on the diagonal show the square root of AVE