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The moderating role of implicit person theories on gender-role orientation and entrepreneurial intentions

A thesis submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, Johannesburg, South Africa, in fulfilment of the requirements for the degree of Doctor of Philosophy

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ABSTRACT

South Africa, like the rest of the world, has suffered an economic downturn as a result of the pandemic, COVID-19. In addition, the country has historically experienced an unequal distribution of resources, which affects poverty levels. Unfortunately, this unequal distribution of resources and opportunities continues to impact young people. As a watershed, this research is critical for unlocking entrepreneurial potential.

The main objective of this study is to examine the relationship between gender role orientation (GRO) and entrepreneurial intentions (EI) and the function of implicit person theories (IPT), also known as mindsets, in regulating this relationship. There is consensus that entrepreneurship is a critical motivator for identifying, seizing, and creating new opportunities. Therefore, it is important to understand the elements associated with the intention to engage or behave entrepreneurially.

Previous research on entrepreneurship relied on biological sex as a predictor of entrepreneurial intentions and results have been mixed and sometimes inconclusive, particularly among university students. Therefore, this study focuses on gender role orientation and mindset as determinants of entrepreneurial inclinations as opposed to biological sex.

The study was cross-sectional and followed a quantitative approach. Primary data were collected from a sample of 415 individuals. Data analysis included Pearson correlation, structural equation modelling (SEM) as a statistical technique and t-tests. The results showed that the antecedents of entrepreneurship had a positive influence on the relationship between a feminine gender role orientation and entrepreneurial intentions. However, the observed relationships were not significant. This was also true for the moderating role of mindset on the relationship between gender role orientation and entrepreneurial intentions. On the other hand, this study found a significant propensity toward commercial entrepreneurship in a feminine gender role-oriented population.

These findings not only contradict persistent gender stereotypes that claim entrepreneurial intentions are negatively associated with femininity, but also address the problem of few role models, as attributing feminine attributes to the entrepreneurial image will increase the number and visibility of symbolic role models for individuals with a feminine gender role orientation.

The overall findings of this study will motivate and empower educational institutions, policy makers and training programmes to promote entrepreneurial content and activities that give equal weight to masculine and feminine gender roles and lead to a perceived congruence between femininity and entrepreneurship. These findings are equally effective in persuading financial institutions, media, and other key individuals to support individuals with a feminine gender role orientation in their businesses, leading to an inclusive entrepreneurial ecosystem.

Key words: Gender Role Orientation (GRO), Implicit Person Theories (Mindsets), Entrepreneurial Intention, South Africa

DECLARATION

I, Jeremia Moloi, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in fulfilment of the requirements for the degree of Doctor of Philosophy in the field of Management (Entrepreneurship) at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

Jeremia Moloi

Signed at: Johannesburg

DEDICATION

To future me: Hello again, a significant part of you has met me and each day that passes brings you closer and closer and I hope that my present actions and efforts make you proud. More than anything, I hope that when you read this 10 years from now, you will feel a sense of pride, humility, and self-appreciation.

I hope you will also be inspired to do your best and do good with what you have. Thank you again for being an idea I strive for.

To those who consider themselves my family and friends, I am forever grateful for your support.

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Professor Boris Urban, thank you for accepting me as a student. Your guidance and support have been invaluable. It was a real honour and privilege to be your student. I could not have asked for a better supervisor!

To everyone involved in the data collection for this study: What could I have done without you? Thank you so much for your kindness to me.

To the present me: I acknowledge and appreciate you. What would life be without miracles and surprises? Keep being the miracle you need and never stop surprising yourself.

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CHAPTER 1: INTRODUCTION

1.1 Introduction

This study examined the relationship between entrepreneurial intentions (EI) and gender role orientations (GRO), considering the moderating role of implicit person theories (IPT). This study proves relevant in difficult economic times when jobs are scarce and the country's economic prosperity needs to be stimulated through alternative means of economic participation, one such alternative being entrepreneurship (Mmesi, 2015). The labour market in South Africa is extremely competitive and offers few employment opportunities, even for university graduates. As a result, many students face the problem of unemployment after graduation (Pasara & Garidzirai, 2020). The completion of their studies is no longer a guarantee of employment. This means that many students face a critical decision in their final year of study, namely, to pursue a traditional white-collar career or entrepreneurship and as mentioned, finding a job in South Africa is a challenge. As an alternative to finding a job, entrepreneurship is considered one of the most viable strategies to drive economic development and job creation (Mmesi, 2015; Oosthuizen & Cassim, 2016). Therefore, both the government and universities encourage students to become entrepreneurs after graduation to build a career and boost the economy (Sundelson, 2021). Not all students engage in entrepreneurial activities or at least show entrepreneurial intentions. Therefore, it is important to know the factors that drive and determine entrepreneurial activities. One of these determinants is entrepreneurial intention. Research argues that an examination of entrepreneurial intentions can provide a deeper understanding of the process of entrepreneurial activity because entrepreneurial intentions focus on the individual's state of mind before starting a business (Sundelson, 2021). According to the literature, people formulate firm intentions and show willingness to achieve entrepreneurial goals before engaging in entrepreneurial activities (Sundelson, 2021). Considering the process of intention formation and the fact that students in their final year of study are facing the decision to seriously consider starting a

business after graduation, university students constitute fertile ground for investigation in this study.

In light of this, the study of students' entrepreneurial intentions has gained momentum in research. In an effort to improve and promote students' entrepreneurial intentions, research has focused on factors that influence entrepreneurial intentions (Ozaralli & Rivenburgh, 2016; Bergmann, Geissler, Hundt & Grave, 2018) and gender role orientation is an exponential attribute reported to influence entrepreneurial intentions. This study examined the relationship between these constructs, while accounting for the moderating role of IPT. The study of gender role identity to understand intentions continues to evolve. To understand entrepreneurial intentions, previous research examined the effects of biological characteristics alone on individuals' entrepreneurial intentions and the results were inconsistent and sometimes inconclusive (Majumdar & Varadarajan, 2013; Datta, Bazan & Arnold, 2022). For example, older studies have reported sex differences in EI while more recent studies have either found inconclusive evidence or have not found such differences at all (Passah & Panda, 2021; Ahl, 2006). More recent studies have even reported bias in this type of study due to changes in the conceptualisation of one's identity. These contradictory findings have been attributed to the fact that traditional research has only examined biological differences between males and females and has ignored the study of socially constructed gender role orientation as an alternative theoretical perspective related to gender and entrepreneurial intentions (Passah & Panda, 2021; Ahl, 2006; Perez-Quintana, Hormiga, Martori & Madariaga, 2017). Given the inconsistencies in the literature, it was important to use a robust determinant of entrepreneurial intentions such as GRO.

Gender role orientation provides a robust understanding of why individuals who have a certain gender role orientation behave in a certain way (Schippers, 2007). To distinguish between these concepts, biological sex refers to someone being born either male or a female (Powell & Greenhaus, 2010), while GRO is a construction based on cultural and societal factors and results from the gender role stereotypes attributed to people in society. These stereotypes are rooted in attributes and

characteristics that relate to masculinity and femininity. Therefore, GRO can essentially be described as the extent to which a person identifies with dimensions of masculinity and femininity (Martin, 2004; Powell & Greenhaus, 2010). In an ongoing effort to explain the relationship between dimensions of masculinity and femininity and intentions, researchers who have studied gender roles have found variations within the same sex groups; this means that one male may have a feminine GRO while another may maintain a masculine or even an undifferentiated GRO (Chemaly, 2014).

Against this backdrop, previous studies have traditionally associated entrepreneurial intentions with a masculine gender role orientation (Veciana, Aponte & Urbano, 2005; Díaz-García & Jiménez-Moreno, 2010; Shinnar, Hsu, Powell & Zhou, 2018; Vracheva & Stoyneva, 2020; Vracheva & Stoyneva, 2020). However, recent studies report a shift in the over-emphasis of the traditional image of entrepreneurship as times and contexts have changed. For example, traditional gender stereotypes are fading and there is a growing need for a new sequence of traits required for success as an entrepreneur, driven by the acceleration of business on digital platforms and the rise of the user and customer experience wave, which indeed requires a new sequence of feminine traits for success as an entrepreneur (Ahl, 2006; Vercruysse & Birkner, 2021). It is clear that entrepreneurship cannot exist in isolation from these changes. The shape of entrepreneurship today is more fluid and less rigidly focused on masculinity, suggesting that attitudes and intentions toward entrepreneurship may have changed in light of this shift in the image of entrepreneurship. Consequently, it is possible that individuals with a feminine GRO have a stronger propensity to engage in entrepreneurship (Adamus, Čavojová & Šrol, 2021; Markman & Baron, 2003). In this regard, the rationale for examining the relationship between GRO and EI is to debunk the one-size-fits-all approach rooted in the study of EI through a biological sex lens and to support the EI literature with recent findings.

To derive these findings, this thesis examined the relationship between GRO and EI while accounting for the moderating role of IPT also known as mindsets, on this

relationship. While GRO alone may act as a determinant of EI, there is an opportunity to explore the influence of mindsets on this relationship, as a growth mindset may positively influence the propensity to engage in entrepreneurial behaviour (Burnette, Pollack, Forsyth, Hoyt, Babij, Thomas & Coy, 2020; Murphy & Dweck, 2010). Implicit person theories – also called mindsets – are theories or beliefs a person holds about the flexibility or rigidity of personal characteristics such as knowledge acquisition and application, intelligence, skills and abilities (Carr, Rattan & Dweck, 2012; Li, Fan & Leong, 2021). Mindsets can be classified as fixed or incremental, also known as growth mindsets. People with a fixed mindset believe that traits such as skills and abilities are rigid and difficult to change. People with a growth mindset, on the other hand, believe that skills are malleable and tend to attribute failure or success in terms of effort. Given the incremental nature of the growth mindset, this study argues that if an individual's GRO is weakly correlated with entrepreneurial behaviour, the presence of a growth mindset may positively influence the strength of this relationship (Burnette et al., 2020; Murphy & Dweck, 2010). This claim is also supported by Murphy and Dweck (2016) and John and Park (2016), who propose that mindset can explain intentions much like the constructs of the theory of planned behaviour (TPB) can predict intentions, so it would be valid and methodologically appropriate to model these theories together. Other researchers have studied mindsets and intentions together in other domains. For example, in the travel industry, it has been confirmed that mindsets can predict intentions to revisit places that are a travel attraction, in accordance with the TPB. Mindsets have been found to significantly influence attitudes toward intentions (Japutra, Lourerio, Molinillo & Ekinci, 2019).

Considering the possibility that mindsets theoretically function in accordance with TPB to determine intentions, the researcher recognised the opportunity to connect these three theories (GRO, EI and IPT) as they have not been studied together in the field of entrepreneurship. This is a critical contribution to theory as new and a combination of unconventional theories are shaping the development of academic research, especially in disciplines of entrepreneurship and management research where the base of African literature is formulated based on Western theories

(Sundelson, 2021). Thus, in addition to bringing these theories together, this research addresses the limitation of the dominance of Western management theories applied to a range of African contexts under the assumption of broad applicability (Sundelson, 2021). The literature on gender orientation and implicit person theories (mindsets) is not only insufficient in the discipline of entrepreneurship, but there is even less work examining GRO, EI and mindsets in South Africa. Given the dwindling and changing gender stereotypes in South Africa alone, this study will contribute new insights to the development of the indigenous literature as it draws on the specificity of the local context.

In summary, the present study examined the relationship between gender role orientation (GRO) and entrepreneurial intention (EI), as well as the moderating role of implicit person theories (IPT), also known as mindsets, on this relationship, with the subject of interest being final year university students. It proves relevant to understand the EI of students, as final year students are in a position to make a career-related decision after graduation (see page 12 in the methodology section for a detailed rationale for the use of students in this study).

1.2 Context of the study

This section provides the background for this study by outlining the status and developments in understanding the challenges associated with entrepreneurial intentions and their determinants in South Africa.

Entrepreneurship has become a subject of interest in academic research, especially in developing countries such as South Africa. The increase in this research is due to the need to address the problems of unemployment and low economic growth, which have become threatening issues for both private institutions and the government (Bowmaker-Falconer & Meyer, 2022). To make matters worse, South Africa has experienced an economic downturn due to the impact of COVID-19; this is over and above the country's legacy of unequal distribution of resources (Boris & Moloi, 2022), which in turn affects poverty and employment levels (Mike & Penny, 2016). Unfortunately, young people continue to experience this unequal distribution

of resources and opportunities. The public and private sectors have failed to absorb enough young people to address the unemployment problem (StatsSA, 2019). In fact, the youth unemployment rate increased in 2021; over 63.2 percent of youth were out of work (Stats SA, 2021), which was 7.3 percent more than in 2020. These alarming statistics and concerns have led to the need to explore entrepreneurship today as an alternative approach to boost economic activity and employment.

Recognising that unemployment and lack of growth are not unique to South Africa, there is widespread agreement that the creation of new businesses is critical to fostering economic productivity and development (Datta, 2020). In response to this call, the South African government, academic institutions and the private sector have explored and promoted entrepreneurship (self-employment) and other alternative ways to increase employment opportunities as a solution to improve economic activity (Turton & Herrington, 2013; Shava, 2022; Roos & Botha, 2022; Neneh, 2022). To date, for example, South Africa has commissioned several small, medium and micro enterprises (SMMEs) interventions to promote and stimulate entrepreneurial activity. However, it is important to note that entrepreneurial activity does not occur in isolation from intentions; rather, intentions are critical to predicting behaviour. Entrepreneurial intentions capture a person's state of mind, which then drives the propensity to engage in entrepreneurial activity (Fenech, Baguant & Ivanov, 2018). In the case of South Africa, research has shown that entrepreneurial intentions are low, which in turn is due to the low rate of early and established business ownership (Bowmaker-Falconer & Meyer, 2022). According to the literature and the GEM report, entrepreneurial intentions are low. In fact, total early-stage entrepreneurial activity in South Africa (TEA) is lower than in countries comparable to SA from a development perspective (Georgescu & Herman, 2020; Olufunso, 2010; Turton & Herrington, 2013; Bowmaker-Falconer & Meyer, 2022). These low indicators and challenges suggest the need to examine other factors and variables that determine entrepreneurial intentions.

Recent studies have pointed to the importance of gender roles and mindsets in promoting entrepreneurial intentions (Mueller & Conway, 2013; Zampetakis, Bakatsaki, Kafetsios & Moustakis, 2016; Datta, 2020; Burnette et al., 2020).

Therefore, to support the central thesis of this study, these factors were outlined in line with the historical context of South Africa. As one of the critical attempts to promote entrepreneurial intentions, the management literature has examined the influence of gender on intentions. The results of this research were largely inconsistent, and the research consisted of Western conclusions. The inconsistency in the research was caused by a binary examination of sex instead of an exploration of GRO (Datta, 2020). This affected the entrepreneurial space in several ways. First, the overarching entrepreneurial image in SA was positioned as masculine (Iwu, Muresherwa, Nchu & Eresia-Eke, 2020; Breen & Leung, 2020) and secondly, the attribution of entrepreneurship to a masculine gender role has led to an undersupply of symbolic representatives for those with a feminine gender role orientation (Laviolette & Radu, 2008; Etim & Ilwu, 2019; Datta et al, 2022; Adamus et al., 2021) and, finally, there is a narrowed view of gender in government policies that do not take into account the gender dynamics in the country, especially the social specifications of gender stereotypes and norms that shape one's gender role orientation. Therefore, this study examined GRO as an important determinant of EI because it helps us explain questions that previous research could not answer; and more than that, GRO helps us bring inclusion to a world that previously categorised individuals as binary (Shange, 2017). Having laid out the value and context of GRO in this section, particularly in studies of entrepreneurship and entrepreneurial intentions in South Africa, this section concludes with a discussion of mindset.

This study argues that to strengthen a relationship between GRO and EI, mindsets are critical. This is because a growth-oriented mindset is reported to have a positive impact on EI and its antecedents (Japutra, Loureiro, Molinillo & Ekinci, 2019). Moreover, according to Folklore (2022), a growth-oriented mindset also predicts how quickly one would take entrepreneurial action. This is also true in South Africa, where would-be entrepreneurs report identifying good opportunities but still choose not to act on those opportunities in a timely manner or at all (Bowmaker-Falconer & Meyer, 2022). The GEM report indicates that over 53 percent of these individuals would not take action for fear of failure, which is higher than the global average of 45 percent and the African average of 44 percent (Bowmaker-Falconer & Meyer, 2022). Hunter and Scherer (2009) assume that people with a growth mindset view

the possibility of failure as an opportunity for their development rather than a limitation, while people with a fixed mindset tend to view the possibility of failure as a weakness in their own abilities. With this in mind, it is reasonable to assume that mindset plays an important role in the study of intentions, because despite the many sophisticated policy and government initiatives aimed at helping SMEs to operate sustainably while reducing the failure rate, the TEA can still be inert (Galawe, 2017). In the context of this study, the researcher argued that growth mindset will moderate the intensity of the relationship between GRO and EI, as research reports that mindsets and GRO influence differences in motivation and behaviour (Chemaly, 2014; De Freitas, 2015; Levy, 2016; Lebusa, 2011; Tshishonga, 2022).

1.3 Problem background

Entrepreneurship development in South Africa has been a challenge for decades. This struggle to develop entrepreneurship is driven by a significant number of early business failures and low entrepreneurial intentions among youth and recent graduates (Chinomona & Maziriri, 2015; Shange, 2017; StatsSA, 2019; Sundelson, 2021). This is worrying as entrepreneurship is seen as important for promoting economic development and job creation. Youth unemployment in South Africa reached a significant level of 66.5 percent in 2021. Regrettably, a significant proportion of unemployed youth are made up of graduates and those with tertiary qualifications, as listed in the GEM report (Bowmaker-Falconer & Meyer, 2022). It is clear that an attempt to revive entrepreneurship in South Africa must address student awareness, attitudes and intentions towards entrepreneurial activities. Thus, despite the notable problem of low entrepreneurial activity, the critical question is how can a decision to become an entrepreneur be encouraged? The literature posits that EI is largely influenced by cognitive factors such as beliefs and attitudes (Sundelson, 2021).

Previous studies argue that constructs from the TPB predict behaviour, in other words, attitude toward behaviour (ATB), perceived behavioural control (PBC) and subjective social norms (SSN) (Liñán & Fayolle, 2015; Mack, White & Senghor, 2019). TPB is a theory of intentions developed by Ajzen (1991), which postulates

that the formulation of intentions leads to the manifestation of corresponding behaviours (Sundelson, 2021). Research has previously found significant variance in EI explained by constructs of ATB (Liñán & Fayolle, 2015; Mack, White & Senghor, 2019). Therefore, this study uses this theory to model and merge the variables of interest in this study, as both GRO and mindsets operate in accordance with this theory. Research examining the effect of ATB, PCB and SSN alone found that these constructs have a large effect on EI, especially among university students. The theory has been validated as reliable, generalisable and comprehensive in predicting various behavioural intentions, including EI (Bazan, Shaikh, Frederick, Amjad, Yap, Finn & Rayner, 2019; Sundelson, 2021).

It can be inferred from the above discussion that GRO can be associated with EI via ATB, PCB and SSN, taking into account the moderating role of mindsets. In this case, this paper argues that despite the plethora of factors that may influence EI, exploring gender role orientation through TPB and mindset as a determinant of EI is theoretically and contextually meaningful. Theoretically, few studies have examined how gender role orientation and mindset influence EI, which is a gap in the literature and the study of these constructs is rare in the emerging African market. In addition, GRO acts as an alternative indicator or predictor of EI compared to sex, which has not been previously implicated in the development of human identity in South Africa. The current overview of South Africa shows that people in this country do not necessarily adhere to traditional gender role prescriptions as was expected in the past (Bernstein, 2014; Chemaly, 2014). Therefore, there is a need to expand the theoretical understanding of gender orientation in relation to entrepreneurship in South Africa to bridge this gap (Bernstein, 2014; Chemaly, 2014; Kamberidou, 2020; Swartz et al., 2022).

Today, a growing number of people are abandoning typical gender role prescriptions that were once prescribed solely on the basis of sex (Vercruysse & Birkner, 2021). Another problem with gender role defaults that were once based purely on sex is that these defaults have been translated into research scales used in entrepreneurial research, in other words, these scales do not directly measure

masculinity or femininity, but derive these constructs from endorsement of various traits and behaviours (Kachel, Steffens & Niedlich, 2016). For example, the PAQ and BSRI assess masculinity and femininity as superordinate constructs, with each construct represented by gender-stereotypical attributes such as being competitive, gentle and affectionate (Choi & Fuqua, 2003; Blake-Beard, Shapiro & Ingols, 2020; Kachel et al., 2016; Preston, Watts, Anestis & Lilienfeld, 2018; Berrocal, Cervilla, Álvarez-Muelas & Sierra, 2022). This is a limitation in research because the meaning of gender role attributes such as meek, dominant and affectionate is dependent on culture and time (Kachel et at., 2016; Bernstein, 2014; Chemaly, 2014; Kamberidou, 2020; Swartz, Scheepers & Toefy, 2022). It is plausible that such scales have led to inaccurate assessment of EI and bias in entrepreneurial policies, as recent studies have reported an unstable factor structure in these scales where some attributes cross-load rather than loading on their respective dimensions as either masculinity or femininity; in other words, the scales do not directly measure masculinity or femininity, but rather derive these constructs from affirming various traits and behaviours (Kachel et al., 2016; Preston, Watts, Anestis & Lilienfeld, 2018; Blake-Beard et al., 2020; Berrocal, Cervilla, Álvarez-Muelas & Sierra, 2022). To overcome these limitations, by examining and modelling GRO with other variables of interest, this study used a measure of GRO that focuses on gender role orientation on a global scale rather than focusing on specific indicators or attributes of femininity and masculinity and to maintain independence from changes that may or may not occur depending on culture and time. For example, the researcher used items such as "My behaviour would traditionally be considered (1) Not at all masculine to (7) Very masculine" to directly capture the construct of masculinity/femininity. Given the questions unpacked above, it is evident that examining EI through the dimensions of GRO is a theoretical contribution necessary to make research on gender theory and entrepreneurship congruent.

In an attempt to expand on the problem described above and to close the loop on the proposed determinants of EI, this paper links the three constructs (GRO, EI and mindsets). Although GRO can explain EI through ATB, PBC and SSN, research shows that mindsets can directly influence attitudes, intentions and behaviours

(Zampetakis et al., 2016). Indeed, mindsets have been included and demonstrated as a direct predictor of intentions in a variety of disciplines in the TPB model (Zampetakis et al., 2016; Sihombing, 2018; McLarty, Skorodziyevskiy & Muldoon, 2021; Rustiana & Mohd, 2022). In light of the problem at hand, how does the examination of mindsets contribute to our understanding and potential improvement of low EI among students in South Africa? The GEM report has indicated that aspiring entrepreneurs today may have an entity or fixed mindset in relation to entrepreneurship. The study shows that although a proportion of South Africans consider entrepreneurship a good career choice and some of them believe they have the opportunities and skills to be entrepreneurial, over 53 percent of these individuals will not start a business due to fear of failure (Bowmaker-Falconer & Meyer, 2022). The theory of mindsets used in this study, in other words, implicit person theory (IPT), attributes fear of failure to a fixed mindset, meaning that these individuals view their abilities as fixed and therefore, an investment of significant effort as futile since they perceive their ability to develop as difficult to achieve, on the other hand, those with a growth mindset attribute failure to a weakness in strategy and view growth and improvement in their capabilities as feasible. What makes mindsets in this study so valuable is the evidence that they can predict and motivate intentions and behaviour. According to Burnette et al., (2020), people with a growth mindset tend to have a positive attitude toward EI.

In entrepreneurship research, especially in South Africa, intentions have essentially been considered at the level of commercial entrepreneurship, while social entrepreneurship is gradually gaining attention (Urban & Kujinga, 2017). To address the identified problem of low EI, literature argues that for entrepreneurial intentions to flourish, cognitions related to different types of entrepreneurship need to be tapped into (Urban & Kujinga, 2017; Datta, 2020). For instance, in a country like South Africa, where the rate of unmet social needs is high and government support structures are inadequate to address social ills, the insights associated with different types of entrepreneurship must be harnessed for entrepreneurial intentions to flourish, the research argues that policy makers must also promote social entrepreneurial intentions by deliberately focusing on beliefs and cognitions that

stimulate and motivate social entrepreneurial intentions. However, the researcher has found that a significant number of entrepreneurship studies do not capture preference for the entrepreneurial path (commercial or social) (Stephan, 2010). Sometimes individuals who score low on commercial EI are also written off on social EI. As one can imagine, this representation is not always accurate. Therefore, as a supplement to the scales, this study included a research item that captures the participant's preferred entrepreneurial path to capture perceptions of the desirability of starting a social enterprise, namely if you had the opportunity to start a business, would you prefer a social or a commercial enterprise?

Research questions and objectives of the study

In an effort to solve the above problems, the following objectives are established:

- Assess the relationship GRO and mindset might have in facilitating EI among students in a South African context.
- Determine the extent to which mindsets influence the strength of the relationship between GRO and EI.
- Adopt a GRO scale focusing on gender role orientation on a global scale to capture participants' direct personal assessment of their GRO in terms of how feminine or masculine they are.
- Establish a relationship between gender role orientation, attitude toward behaviour (ATB), subjective social norms (SSN) and perceived behavioural control (PBC).
- Establish the entrepreneurial path the participants in this study prefer and how it relates to EI intentions.

Research questions

Although gender role orientation has been used to predict intentions in medicine and in clinical and organisational psychology, there are few studies examining GRO, IPT and EI within the entrepreneurship space, thus presenting an opportunity

to add theoretical and practical value. Therefore, this study investigates this research gap and answers the research questions listed below:

Research Question 1:

Do variations in gender-role orientation relate to variations in the level of entrepreneurial intentions of university students in South Africa?

Research Question 2:

Whether implicit person theories (mindset) moderate the interaction between gender-role orientation and entrepreneurial intentions of university students in South Africa?

Research Question 3:

Whether variations in gender-role orientation are related to variations in the level of entrepreneurial intentions through attitude towards behaviour (ATB), subjective social norms (SSN) and perceived behavioural control (PBC) of university students in South Africa?

1.4 Delimitations of the research study

- The research focused on university students in South Africa (within the Gauteng province).
- The focus was on final year students in South Africa
- The study excluded students with an operational business

This study focused on final-year university students in the Gauteng province of South Africa. Due to the cross-sectional nature of the study, all other provinces were excluded because it was difficult to obtain representativeness in these other provinces during the data collection period. Students in their early and post graduate years of study were excluded from this study; only final year undergraduate students were included as they are at a stage in their lives where decisions and actions need to be made regarding their careers as employees or entrepreneurs.

Theoretical definitions

Entrepreneurial intentions – refers to a person's mental cognitions that create a desire, willingness, and inclination to start an enterprise in future (Thompson, 2009; Passah & Panda, 2021). EI can be understood as the mental preparation of a person to start a business initiative. Overall, entrepreneurial intention acts as a predictor of behaviour (Hamidi, Wennberg & Berglund, 2008; Passah, & Panda, 2021).

Gender role orientation – Femininity and masculinity are the central constructs of gender role orientation. Therefore, this dimension focuses on how people self-identify or perceive that they hold more feminine or masculine gender roles and stereotypes. Gender role orientation focuses on the social and psychological attributes associated with femininity and masculinity. Thus, a person's gender role orientation is shaped by their exposure to and adherence to social and cultural norms. Gender role orientation is prescriptive behavioural expectations and stereotypes associated with femininity and masculinity (Wacker, Fischer & Schorlemmer, 2021; Passah & Panda, 2021; Berger & Krahé, 2013; Bhana, 2005; Cock, 2003). Femininity refers to relational attributes such as building and maintaining relationships and affirming emotions. Masculinity focuses on instrumental attributes, namely assertiveness, competitiveness, and goal orientation (Berger & Krahé, 2013).

Implicit person theories – also called mindsets – are theories or beliefs a person holds about the flexibility or rigidity of personal traits such as knowledge acquisition and application, intelligence, skills, and abilities (Carr, Rattan & Dweck, 2012; Li, Fan & Leong, 2021). This means that mindsets show a person's belief about the stability of personal traits and behaviours. Two forms of mindsets have been described in the literature, namely fixed and growth mindsets (Vandewalle, 2012; Heslin & Vandewalle, 2008; Rothstein & Jackson, 2021).

Vandewalle (2012) defines a fixed mindset as the firm perception that personal and behavioural properties are unchangeable, rigid, and difficult to improve. This is also

referred to as entity implicit theory. Entity theorists assume that personal characteristics are inherently rigid and difficult to improve (Thompson, 2006; Kroeper, Fried & Murphy, 2022). On the contrary, a growth, developmental or incremental orientated mindset advocates change and development (Levy, 2016; Török, Szabó & Orosz, 2022). A growth-oriented mindset is also referred to as incremental implicit theory. Incremental theorists view personal and behavioural characteristics as malleable and amenable to change and growth over time (Heslin & Vandewalle, 2008; Kroeper et al., 2022; Török et al., 2022).

1.5 Contribution

This section discussed the practical and theoretical contributions of this research. South Africa today does not fully benefit from a pool of potential entrepreneurs and their untapped potential, because people have long been classified as either entrepreneurial or non-entrepreneurial and inducing EI has been viewed as difficult (Shange, 2017; Data, 2020; Bi & Collins, 2022). In addition, EI and factors such as mindsets have been studied separately. By bringing these constructs together, this paper challenges policymakers and researchers to examine entrepreneurial potential holistically, as knowledge of the influence of mindsets on fostering the relationship between EI and its determinants such as GRO reveals a way to tap into cognitive-affective behaviours, which is informative for policymakers as mindsets can be improved or rather broadened (Burnette et al., 2020); for example, theory suggests that fixed mindsets relate negatively to intentions (Levy, 2016; Burnette et al., 2020; Bi, 2022), however, not all is lost given that through mindset interventions, an incremental or growth mindsets can be achieved (Levy, 2016; Burnette et al., 2020; Bi, 2022), aspiring entrepreneurs can build their repertoire of thoughts and actions through interventions, which then enables them to develop control beliefs and resilience in the face of challenges (Levy, 2016). Although the concept of mindset has not been explored in the entrepreneurial literature, particularly in the context of GRO and EI, it holds great potential for improving attitudes and perceptions of efficacy towards behaviour.

Based on the above, this work has the potential to influence change in the career prospects of individuals with a feminine or a masculine gender role orientation in relation to entrepreneurship in South Africa. The above discussion shows that through an interplay of growth mindsets, GRO and EI, it is plausible for individuals to see a congruence between themselves and entrepreneurship as mindsets might improve the consistency of gender role orientation and attitudes toward entrepreneurial intentions. As a result, individuals' desire to engage in entrepreneurship improves (Olsson & Martiny, 2018; Schneider & Bos, 2019), which may ultimately reshape the instrumental and rigid social image and construction of entrepreneurship (Pérez-Quintana & Hormiga, 2015).

In addition to its practical contributions, this work also makes a strong theoretical contribution. First, it combines three constructs (EI, GRO and mindset) that are usually studied separately by different academic disciplines and applies them to the South African context. It is true that the literature on EI, GRO and mindsets is predominantly from the Western context. Therefore, the findings of this study bring realism to findings as the data are relevant to the emerging African context, especially when it comes to GRO. This work has argued that people in South Africa do not necessarily adhere to traditional gender role prescriptions as has been expected in the past (Bernstein, 2014; Chemaly, 2014). Therefore, the study of GRO in South Africa has the potential to enhance theoretical understandings of GRO and entrepreneurship in South Africa, as insights grounded in context- and data-driven insights offer an accumulation of indigenous knowledge, generalisability and rich new questions and answers to gaps that exist in the management literature.

This study not only contributes to theory, but also addresses a methodological limitation by employing a methodologically robust instrument that provides an alternative way to assess gender role orientation in the entrepreneurial discipline. This instrument directly measures GRO (masculinity and femininity). This is an advance over traditional scales that measure a collection of personality and gender stereotypical attributes as a representation of the overarching constructs of masculinity and femininity (Kachel et al., 2016; Nascimento, Kosminsky, Colares &

Leão, 2019; Kosminsky, Nascimento, Ribeiro & Leão, 2022). Such traditional approaches and metrics encounter inconsistencies as the attributes traditionally used to represent masculinity and femininity continue to change (Kamberidou, 2020; Swartz, Scheepers & Toefy, 2022), as does the cultural image and construction of entrepreneurship. Therefore, older gender role orientation scales are culturally- and time- dependent, which presents gaps in research. The adopted GRO measures gender role orientation on a global level; it is not dependent on indicators or attributes of femininity and masculinity to measure these constructs, making it a more robust instrument in terms of its timeliness and reliability (Kachel et al., 2016; Wilde & Diekman, 2005; Ebert, Steffens & Kroth, 2014; Kosminsky et al., 2019; Kosminsky et al., 2022). Furthermore, the application of this scale in South Africa opens up the possibility of reusability in an African emergent context, which is critical for building indigenous theory in the entrepreneurial field.

The final contribution of this study is the investigation of the participants' preferred entrepreneurial path, i.e., commercial or social entrepreneurial career path. In order to increase the pool of entrepreneurs, it is necessary to understand the cognitions related to different types of entrepreneurship (Stephan, 2010), e.g., how can we promote social versus commercial entrepreneurial intentions? There is a dearth of studies examining both types of entrepreneurship (Wach, Kruse, Costa & Antonio Moriano, 2021), and in most cases social entrepreneurial intentions are examined separately or negated (Stephan, 2010). While the focus of the study is on GRO, mindsets, and EI, to complement the study findings, this study examined participants preferred entrepreneurial path to match participants' EI with the preferred entrepreneurial path they find attractive. This knowledge is useful for policymakers to develop 'tailored' programmes that focus on developing the right cognitions to encourage entrepreneurial activities.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The purpose of this study was to examine the relationship between GRO and EI and the moderating influence of implicit person theories. These variables were identified to work in accordance with the TPB. GRO is used to predict and explain whether an individual will have a lower or higher propensity toward entrepreneurship and implicit person theories work to increase or decrease the strength of the interaction between GRO and EI.

The theory of planned behaviour serves as the main guide for this study. That is, the concepts or tenets of this model are used as the basis for the conceptual framework of this study. This section outlines how each of the variables of interest to this study aligns with the basic model. First, entrepreneurship is introduced to set the context and background of the study, followed by a rationale for the base model, then EI, GRO, IPT and finally, an overview of the interchange between these three variables as they relate to this study.

2.2 Entrepreneurship

Entrepreneurship is undoubtedly a catalyst for economic growth, especially because it can respond to challenges such as job insecurity and the lack of jobs for young people (Khan & Abdullah, 2019). For this reason, developing countries like South Africa are encouraged to create an environment conducive to entrepreneurial development (Iwu, 2018). The first step in promoting entrepreneurial activity is to awaken entrepreneurial intentions. Several researchers assert that understanding entrepreneurial intentions is critical to entrepreneurial success (Potishuk & Kratzer, 2017; Anwar & Abdullah, 2021). Entrepreneurial intention is composed of plans to identify and explore opportunities that lead to a profitable business (Kuckertz, Kollmann & Stöckmann, 2016). Therefore, entrepreneurial behaviour is best

predicted by intentions, as entrepreneurship is considered a planned activity (Anwar & Abdullah, 2021).

Since intentions precede behaviour, it is correct to assert that entrepreneurial intentions are manifested through cognitive states. That is, individuals whose cognitions maintain that they have the skills, abilities, and resources to pursue entrepreneurial initiatives have the confidence or efficacy to engage in entrepreneurship, which increases their intention to engage in entrepreneurship (Anwar & Abdullah, 2021). The next section focused on a critical evaluation of the intention model to justify the base model of intentions used in this study.

2.3 The justification of the base model (theoretical framework)

The purpose of this section is to illustrate the extent to which the base framework is valuable and applicable to this study. In order to validate the adoption of the base model for this study, this section argues the suitability of the base model in responding to the research problems formulated in this study by evaluating the appropriateness, fit and rigour of the base model in the South African context. The researcher also critically evaluates how the base model integrates the variables of interest for this study, in other words, how GRO, EI and mindsets function in accordance with the proposed base model.

There are several reviews and comparisons of intention models (Krueger, 2000; Linan & Chen, 2009; Koenig, 2013; Passah & Panda, 2021). However, the focus of this study is not to complete this comparison. Although some of these models have been shown to be useful for predicting behaviour, one theory remains dominant, namely the TPB (Krueger, 2000; Koenig, 2013). For this reason, the TPB model was chosen for this study. TPB is a framework through which an individual's behaviour can be explained, the theory focuses on establishing a link between beliefs and behaviour. It is mainly used in behavioural science as a mechanism to predict intentions to start or stop certain behaviours such as smoking, dieting and

starting a business (Mvula, 2018; Van der Velde, Van Dijk, Kiefte-de Jong, 2022; Dehdari, Mirzaei, Taghdisi & Zare, 2022).

Three main reasons were argued as the leading factors for the selection of this model in this study: First, Davids (2017) argues that the TPB is better suited for predicting intentions in a SA context, as the model can reportedly explain 58 percent of the variance in EI, which led to extensive use of the model in entrepreneurship and management. This extensive use of the framework meant that the framework itself was subjected to critics and reviews, a synthesis of these reviews of the model reveals its strengths and limitations, which are discussed in detail in the section on EI. The accumulated research on the model points to the significance of the TPB as a conceptual framework for studying intentions. Moreover, in reviewing the recent literature, there is agreement among several researchers that the framework is a robust method for thinking about how cognitions that may or may not translate into EI are formed (Van der Velde et al., 2022; Dehdari et al., 2022; Lin, Ye, Lin, Lai, Jin, Wang & Su, 2021) and how much the framework has evolved in being able to incorporate the adoption of background factors that then interact with antecedents of EI to predict intentions (Malebana, 2012; Tshikovhi, 2014; Sundelson, 2020; Van der Velde et al., 2022).

Given the above arguments, the second reason that makes the adoption of TPB appropriate for this study is that the theory can be extended to include background factors such as GRO and mindsets as predictors of EI through attitudes toward behaviour (ATB), subjective social norms (SSN) and perceived behavioural control (PBC) in the model. This extension improves the robustness of the model. Following the research of Lin et al., (2021) in their work examining intentions for safe sexual behaviour, the TPB was extended to account for background factors such as sexual experience and the model was successful in predicting intentions considering background factors, similarly, Tseng, Cheng, Kuo, Hou, Chan and Chou (2020) in their study of young people's safer sex intentions in China extended the TPB to include additional variables relevant to context and the model explained more than 45 percent of the total variance. The success in extending this theory in multiple

studies, as discussed above, provides confidence that the adoption of this framework for the purpose of studying EI through GRO while accounting for mindsets is feasible.

The research questions in this study also extend to the influence of mindsets on EI. Thus, in an attempt to expand our knowledge of factors that can explain intentions and behaviour, Murphy and Dweck (2016) and John and Park (2016) propose that mindset can also explain behaviour, similar to what the theory of planned behaviour has done. Japutra, Lourerio, Molinillo and Ekinci (2019) merged these two theoretical approaches in the field of travel and tourism. Japutra et al., (2019) examined how travellers' mindset and TPB explain their intentions to revisit a destination and found that mindsets and TPB constructs predict intentions; more specifically, mindsets influence attitudes toward intentions. To confirm this claim, Sisk et al., (2018) also found that growth mindsets influence self-efficacy. This assertion is relevant to this study because self-efficacy is considered comparable to perceived behavioural control within the framework of the theory of planned behaviour. PBC concerns itself with the perception of the ease or difficulty of performing a task. Thus, the TPB helps to integrate and account for the moderating effect of mindsets on the relationship between the primary variables of interest (GRO and EI) in this study.

The third reason this model was used in this study is its ability to account for context. In the literature, the TPB has been considered appropriate for the South African context, especially among university students and context plays a crucial role in clarifying and adding depth to results (Boris & Moloi, 2022) adds that the application of TPB in an African emerging market is a necessity, despite the increasing application of this model in South Africa, the entrepreneurial literature is still polarised with a Western perspective when it comes to EI, which has led to a gap in building indigenous knowledge and theories that reflect real experiences and unique sociocultural factors (Liñán & Fayolle, 2015; Bruton, Zahra, Van de Ven & Hitt, 2022) that have the potential to influence intentions and subsequently

intentions (Liñán & Fayolle, 2015), therefore, the sufficiency of this model in accounting for context once again makes it suitable for this study.

Attributes of TPB such as ATB, SSN and PCB tend to be comparable to other countries, but only to a limited extent (Liñán & Fayolle, 2015). The application of the TPB in South Africa provides an opportunity to apply the results to context and the model appears to capture and account for the complex sociocultural factors relevant to South Africa. For example, in a country based on the principles of collectivism and "ubuntu" (I am because we are), there is a strong need for conformity because the core values of these principles are rooted in group solidarity (Mazonde, 2016; Zondo, 2022). Therefore, SSN can exert a strong influence on attitudes toward behaviours because, in this context, attitudes are subject to the influence of the opinions of significant others (Mvula, 2018; Sundelson, 2020). The unequal distribution of resources and the legacy of inequality in South Africa further exacerbate this reliance and compulsion to conform (Matlala & Shambare, 2017). Given this problem, family and friends are an important source of influence. For example, the decision to become an entrepreneur or employee depends on family background, especially for African students, because most of these students need to earn income and support their families immediately, sometimes even external family members and there is great significance (status) attached to having a job and being able to support others (Ratlebjane, 2015; Matlala & Shambare, 2017; Kawimbe, 2022). Therefore, the motivation for one's behaviour is influenced by the duty for the good of the group. Considering the above, the application of TPB in this study provides an opportunity to integrate the results of this study into the context.

Based on the context above, the concept of duty and obligation to others is linked to GRO because depending on one's gender role orientation, there are expectations and beliefs about how one should behave and contribute to society (Matlala & Shambare, 2017; Shange, 2017). Therefore, depending on which GRO one holds, one is likely to find entrepreneurship attractive or not based on society's image of entrepreneurship and its association with certain gender role orientations (Shange,

2017). This highlights the critical influence of SSN on attitudes and perceptions of one's competence in starting a business.

However, despite the prescriptions assigned to different gender role orientations, research suggests that GRO plays different roles at different stages of the entrepreneurial journey (Shange, 2017, Datta, 2020; Adamus et al., 2021). For example, in the early stages of entrepreneurship, a feminine gender role orientation is considered critical because of the relationships that are formed and the need to produce creative and agile outcomes (Datta, 2020; Adamus et al., 2021). Therefore, at this stage of business development, attributes of a feminine GRO play a significant role in successful business creation through the influence of an individual's ATB and PBC. Once the company is established, the influence of GRO comes into play and continues to the more mature stages of the company. At this stage, different cognitions are required; this stage calls for leadership and a results-oriented approach, that means, influencing and directing the efforts of employees and ensuring that employees have the resources, tools and vision they need to achieve results for the continuation of a business (Vercruysse & Birkner, 2021; Adamus et al., 2021; Gupta et al., 2022). Therefore, research argues that attributes associated with a masculine GRO are paramount. From the above discussion, it can be inferred that the TPB is useful as a framework to capture GRO in a way that is methodologically relevant to answer the questions in this study.

Over and above the sufficiency of TPB in framing variables of interest in this study in a methodologically sound manner, the TPB model has assessed intentions in a variety of fields and as in many of these disciplines, the model has been adopted and applied to the field of entrepreneurship (Mvula, 2018; Van der Velde, Van Dijk, Kiefte-de Jong, 2022; Dehdari, Mirzaei, Taghdisi & Zare, 2022; Krueger, 2000; Koenig, 2013). Entrepreneurship research assumes that entrepreneurial action is planned; hence, the applicability of this framework. Engle, Dimitriadi, Gavidia, Schlaegel, Delanoe, Alvarado and Wolff (2010) conducted a cross-national study to assess the rigour of the TPB as a framework. Their study found positive results, as the framework predicted EI in all 12 countries the researchers studied.

Research has also shown that the TPB is consistent in predicting entrepreneurial intentions in different contexts, especially among university students (Tseng et al., 2020; Lin et al., 2021). Some authors have even suggested the model's suitability for explaining growth intentions (Krueger et al., 2000). Overall, entrepreneurship studies have found that the model explains 30-59 percent of the variation in entrepreneurial intentions, which is consistent with the results of meta-analyses in behavioural science studies (Sheeran, 2002). Thus, considering all this literature, it is evident that TPB is appropriate in the context of entrepreneurship. Therefore, given its validity, this study will adopt and extend the TPB by including entrepreneurial intentions as a dependent variable in the framework.

2.4 Entrepreneurial intentions

This section assesses the adequacy of the intention frameworks used to explain entrepreneurial activity. This is critical to addressing the research problem of low entrepreneurial intention and how the variables of interest in this study interact to explain variance in entrepreneurial intention, so the applicability of these models to this study is weighted.

In reviewing the literature on intention models, three models stand out due to their wide acceptance and application in understanding entrepreneurial behaviour (Van Tonder, 2017; Urban, 2012). First, the entrepreneurial intention model (EIM) coined by Bird (1988). This model states that intentions are formed based on a person's rational or intuitive thinking. According to Bird (1988), contextual and personal factors are antecedents for both types of thinking. As an extension of this framework, Boyd and Vozikis (1994) introduced the construct of perceived ability and behavioural control to understand how these constructs, in conjunction with how a person thinks (rational or intuitive thinking), influence or determine the level of their intentions. Post the revision of this model to incorporate efficacy, there has been a lack of studies testing the framework. Fei and Liu (2023) argue that there is an inherent complexity in developing measures that capture rational, analytic thinking along with intuitive, holistic thinking, which presents the challenge of limited empirical evaluation of the extended model. While this model borrows from TPB

and EEM to some extent by incorporating self-efficacy into the EI process, this theory still differs significantly from them in that, unlike TPB and EEM, it provides limited information on how EI is developed as a determinant of entrepreneurial behaviour at the social level (Fei & Liu, 2023). As mentioned earlier, this theory is anchored on rational and intuitive justification, so the formulation of social norms, attitudes and perceived behavioural control is not incorporated into the core construct of the model (Rai, Prasad & Murthy, 2017; Arafat, Saleem & Dwivedi, 2020; Fei & Liu, 2023).

Moreover, as an inherent starting point of this model, rational thinking incorporates the notion of choice and control in the manifestation of intentions (Fei & Liu, 2023). However, choice and control remain fuzzy in research and have yet to be explored from an African perspective, as the notion of choice and perceived control is still rooted in and strongly influenced by the social and cultural dynamics of a society (Shange, 2017). Therefore, the fact that this model relies on analytical and intuitive thinking as proponents of intentions has raised concerns.

As an extension of some of the concerns raised against the model, Datta (2020) cautions against the overemphasis on personal characteristics, as other scholarly work suggests that entrepreneurial intentions can be formed without rational/analytical thinking and thus this framework negates contexts, particularly in emerging African countries where power dynamics play a critical role in the acquisition of resources and opportunities (Shange, 2017). For example, inequalities and adherence to prevailing social norms may prevent an individual from becoming or remaining an entrepreneur (Matlala & Shambare, 2017). Notwithstanding the existing criticisms, the model remains valuable in the field of entrepreneurship, particularly in identifying critical areas where entrepreneurship learning, coaching and policy development can be improved (Fei & Liu, 2023).

Be that as it may, based on the above arguments, this model may not capture and account for factors such as power dynamics in an African context, applicability to all contexts, the influence of institutions and policy makers in shaping entrepreneurship and subjective social norms, which are a critical focus of this study and its contribution to knowledge. Overall, this model, while recognised, has not

been empirically tested to the same extent as the EEM and TPB (Fei & Liu, 2023). Therefore, in the absence of a comprehensive approach to achieving the research objectives of this study and the limited testing of the model in the African emerging context the model was not used as the central framework for this study.

The second theory examined is Shapero's entrepreneurial event model (EEM). Unlike the other models of intentions constructed to study intentions at a broader level, this model was constructed specifically to study EI (Hadjimanolis & Poutziouris, 2011). The model is based on the theoretical assumption that the propensity to engage in entrepreneurial activities depends on the individuals attractiveness to the idea of starting a business and the extent to which they believe themselves capable of starting a business (Hadjimanolis & Poutziouris, 2011), in parallel, it is argued that a displacement event influences the interaction between EI and entrepreneurial behaviour, this means that for EI to translate into actual entrepreneurial behaviour the individual's propensity to act entrepreneurially depends on some kind of trigger event, where this trigger event can be categorised as a negative, neutral, or positive experience (Hadjimanolis & Poutziouris, 2011; Ogun, 2018; Sundelson, 2021). Despite the broad application of the models, the assumption of a displacement event can be seen as problematic for several reasons. In particular, the assumption of a triggering event, in other words, that a behaviour change is triggered by the occurrence of a favourable or unfavourable external event, is not always true. This makes the application of the model complex, as the appropriateness of the model depends on the context and environment in which it is applied (Ogun, 2018). For example, Chen and Chao (2011) attempt to further validate this in their study of switching intentions toward public transit, the results suggest that some individuals tend to engage in an activity because of habitual behaviour without an influence of a triggering event as such, the generalisability of results based on this model should be presented with the intent to minimise misrepresentation.

Although not intended, the framework of a displacement trigger in this model may indeed be misleading. For example, the popularity of this theory may have actually influenced the normative view regarding business creation, as it suggests that

individuals must wait for a triggering event before pursuing entrepreneurial opportunities. Having said this, there is academic research that shows that university graduates and even graduates of entrepreneurship courses with classroom experience and expertise believe that a significant activity, opportunity or perfect timing must occur for them to become entrepreneurial (Kwong & Thompson, 2016), this mindset about entrepreneurial activity creates a barrier to action. Scholten, Kemp and Omta (2004) point out that the TPB accounts for this constraint in the EEM because it is not formulated on the premise of a triggering event or displacements as drivers of intentions, but rather is based on the expectations of engaging in entrepreneurial activity. Aligning to the shared context above, the focus of this study is to examine the voluntary expectations of being an entrepreneur and thus the applicability of TPB as a framework for the study.

The above arguments point to some differences between TPB and EEM. However, notwithstanding the noted differences between TPB and EE, these frameworks share a point of integration, namely the construct of perceived self-efficacy and attitude toward behaviour (Krueger, 2007; Ogun, 2018). The former is represented as PBC in TPB and perceived feasibility in EEM, these are related in that they concern themselves with an individual's perception of their ability to accomplish a task on the basis of how easy or difficult it is for them. The latter, attitude, is represented as perceived desirability in EEM, which is comparable to ATB in TPB. Both constructs focus on the extent to which a person perceives the performance of a particular behaviour as attractive or unfavourable to him or her. Both models consider attitude toward the behaviour and perceived self-efficacy as significant in predicting intentions (Ogun, 2018). This assumption is consistent with the research intentions of this study, as the researcher assumes a positive relationship between these constructs and EI and a recent evaluation of these models in a South African context found that these constructs effectively explained variance in EI among university students, TPB explained more than 58 percent of the variance, while EEM accounted for 38 percent of the variance in EI (Liñán & Chen, 2009; Sundelson, 2021). Consistent with the limitations of the EEM model noted above, several arguments for the robustness of TPB to this study are presented below.

Similar to the EEM, the TPB was formulated to explain behaviour by intentions. As a basis for the TPB, Azjen and Fishbein (1975) drew on theoretical concepts and work from the fields of behavioural and cognitive psychology, resulting in the theory of reasoned action (TRA). This framework was constructed using two variables that are thought to predict one's actions: attitudes toward behaviour and perceptions of social norms. These have been shown to test significantly within the South African context throughout history (Autio et al., 2001; Krueger et al., 2000; Davids, 2017; Sundelson, 2021). However, recent critics of this model argue that a positive attitude and willingness to perform a particular behaviour are not sufficient to predict behavioural intentions (Van Tonder, 2017). Because intentions cannot be separated from a person's context, factors such as one's abilities, networks and the availability or scarcity of resources influence the execution and performance of certain behaviours (Van Tonder, 2017). This necessitated further development of this model. Ajzen (1991:188) identified another variable as a determinant of intentions called perceived behavioural control. This then expanded the determinant of intentions to include not only the willingness and positive attitude towards the behaviour, but also the ability or at least the belief that one can accomplish a task with some degree of ease or difficulty (Ogun, 2018).

Since then, this theory has attracted considerable attention in the social, behavioural and economic sciences (Davids, 2017). Consequently, with academic attention comes evaluations and criticisms; thus, like the other theories evaluated above, TPB is not without critics. Some researchers question its focus on conscious mental processing of events and its exclusion of the contribution of unconscious mental processing in the formation of intentions (Othman, Hashim & Wahid, 2012; Ajzen, 2011), while other researchers claim that the theory fails to account for the interplay between emotions and attitudes (Wolff, Nordin, Brun, Berglund & Kvale, 2011).

These criticisms suggest that it is not enough to distinguish between different types of attitudes, but that it is also crucial to consider the role of emotions as they systematically influence the strength of our attitudes toward events and behaviours (Ajzen, 2011; Jalilian, Mirzaei-Alavijeh, Ahmadpanah, Mostafaei, Kargar, Pirouzeh

& Brand, 2020). For example, people in a negative mood state tend to evaluate events quite differently than people in positive mood. Therefore, people in a negative state may be less likely to exhibit a positive attitude toward a particular behaviour than people in a positive mood (McKee, Wall, Hinson, Goldstein & Bissonnette, 2003; Tindall, Tremayne, & Curtis, 2021).

Based on the above considerations, it is evident that unconscious mental processing and emotions can have an indirect influence on how individuals respond to certain events and behaviours, thus significantly influencing intentions (Ajzen, 2011; Tindall et al., 2021; Rahman, Ai Ping, Mubeen, Mahmud & Abbasi, 2022). In this regard, it should be noted that TPB does not assume that individuals' behaviours and normative beliefs are constructed without irrationality and inherent biases. Instead, the authors point out that the information individuals draw upon to form their beliefs regarding the performance of a particular behaviour may be correct or incorrect. Indeed, Geraerts (2008) asserts that the beliefs people hold regarding their behaviour may be a result of the irrational manifestation of emotions such as anger and fear. However, the literature posits that regardless of how people arrive at certain behaviours, their attitudes toward those behaviours are a direct result of their beliefs regarding that behaviour (Geraerts, 2008; Ahmad, Anwer & Zhuang, 2020; Liu, Liu & Mo, 2020; Chai, Xu & Li, 2022). Despite rational or irrational beliefs, people's beliefs shape their attitudes toward certain behaviours, which is reflected in their tendency to act or behave in ways that are consistent with those beliefs (Ajzen, 2011). Since this model already accounts for beliefs, this means that it would be appropriate as a central framework for the study to consider mindsets as a moderating variable between GRO and EI. Indeed, studies show that the type of convictions or mindsets (fixed or growth) someone has about the flexibility of their abilities influences their attitudes and sometimes even their behaviours (Levy, 2016; Chai et al., 2022).

Although there are criticisms of the framework, this section has demonstrated and argued support for this model globally (Zhang, Wang & Owen, 2015; Holdsworth, Sandri, Thomas, Wong, Chester & McLaughlin, 2019; Alhamad & Donyai, 2021). In addition, the model has been shown to have explanatory and predictive validity in

a variety of contexts, including South Africa, which is significant because context is important in the study of behaviour. Thus, the application of this model in South Africa has made tremendous contributions to entrepreneurship research by increasing generalisability and enabling optimisation of interventions aimed at controlling or changing specific behaviours (Davids, 2017). Moreover, the contributions are not limited to entrepreneurship. The TPB has contributed to new insights in disciplines such as education, sociology and psychology, where researchers have used the model to assess patients' intentions to seek support related to issues such as abuse and depression (Bohon, Cotter, Kravitz, Cello & Fernandez Garcia, 2016). Given the broad application of the model in important areas of research, it is evident that the TPB continues to play a key role in the formulation of various theoretical and practical conclusions.

The accumulated empirical research and evidence related to the TPB is solid. There is sufficient evidence that the theory does indeed predict intentions and behaviour as claimed (Ndofirepi, Rambe & Dzansi, 2018; Davids, 2017). This model served as the primary framework for this research due to its broader application in the entrepreneurial literature (Lortie & Castogiovanni, 2015), its legitimacy in accounting for cross-cultural context and its considerable explanatory power (Ajzen, 1991; Meeks, 2004; Soomro, Shah & Memon, 2018; Rueda Barrios, Rodriguez, Plaza, Vélez Zapata & Zuluaga, 2022). The following discussion explains how this framework is applied in this study.

How TPB is applied in this study

Having established the suitability of this framework. This section of the paper has examined how the TPB is refenced to govern the proposed model for this study, while taking into account nuances or extensions made for the purposes of this study. To regurgitate, the theory of planned behaviour is based on the premise that in order to determine one's behaviour, one must develop intentions to act accordingly in the near future (Krueger et al., 2000; Davids, 2017; Sundelson, 2021). The conceptualisation of intentions itself is determined by attitude toward the behaviour, subjective social norms and perceived behavioural control (Krueger et al., 2000; Davids, 2017; Sundelson, 2021). All of these three constructs are discussed below based on theory and relevance to this study.

To account for relevance, this study adapted the TPB framework to include the construct GRO and mindset. There is evidence to support the addition of constructs to the TPB to help researchers formulate hypotheses that are appropriate for answering the study's research questions. For example, in an attempt to understand propensity, recent studies have extended the theory of planned behaviour to examine intentions to revisit tourist sites, binge drink, engage in environmentally friendly behaviours, conserve energy and follow COVID-19 protocol (Jandawapee, Siripipatthanakul, Phayaphrom & Limna, 2022; Abbasi, Kumaravelu, Goh & Singh, 2021; Soliman, 2021; Norman, Webb & Millings, 2019; Caricati & Terranova, 2021). In addition, two constructs were added to the TPB model: affective and cognitive. The cognitive construct focuses on the perceived positive benefits or negative costs of the action. The affective construct is concerned with the expected positive or negative experiences associated with performing a particular behaviour (Canova & Manganelli, 2020). This construct specifically refers to emotionally based judgments related to the performance of certain behaviours (Canova & Manganelli, 2020). Current research shows that affective attitudes are robust predictors of a variety of behaviours (entrepreneurial, health and environmental) (Canova, Bobbio & Manganelli, 2020; Bosnjak, Ajzen & Schmidt, 2020).

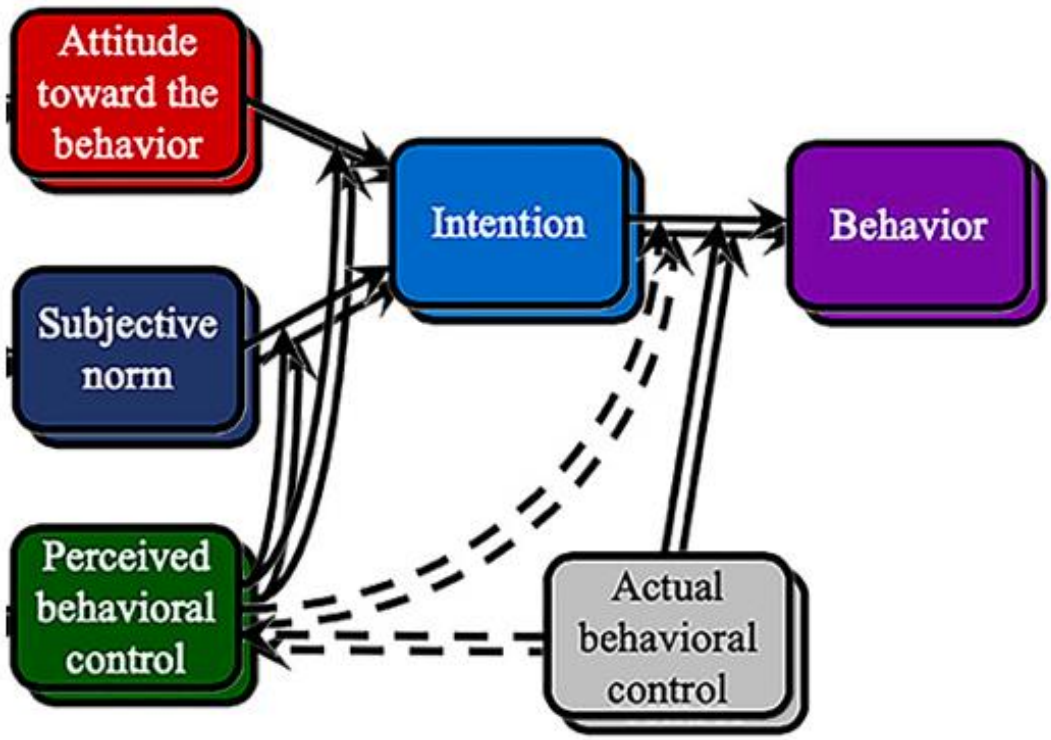
To further develop the TPB model, a variety of constructs have been fitted into this framework. These constructs include moral norms, habit and one's self-concept

(Canova et al., 2020; Bosnjak et al., 2020). Thus, it was confirmed that the model accounts for a variety of background variables that provide insight into why people maintain certain beliefs that influence their attitudes, perceptions of norms and perceived behavioural control (Davids, 2017). Given the context and the intended behaviour, certain background variables may directly/indirectly influence intentions or the relationship between the antecedents of intentions (Fishbein & Ajzen, 2010). For example, previous research has examined how factors such as age, education and personality attributes function as background variables that may predict entrepreneurial behaviour. However, less research has been conducted on factors such as gender roles and implicit person theories, especially in South Africa. Based on gender studies, it is evident that a person's gender role influences his or her attraction to certain occupations, especially occupations with cultural and gender stereotypes (Shange, 2017). Therefore, it may be worth considering the inclusion of gender role orientation as a variable in TPB in predicting entrepreneurial intentions

In the current study, it is proposed to include gender role orientation as an additional variable in the TPB. The main reason for this is that an individual's gender role orientation may shape his or her attitudes. In addition, when studying entrepreneurial intentions, it may be useful to consider GROs as predictors of intentions because they influence behavioural decisions. Considering the different contexts in which the TPB model has been adopted and extended, the effectiveness of this model is high, which is useful for this study as it proves that it can be adopted to account for GRO and mindsets.

Since it is established that GRO and mindsets can function in accordance with TPB, the following section examined in more detail how the TPB attributes, i.e., ATB, SSN, and PBC, influence GRO and mindsets and how these influences manifest in this study. Based on this analysis, the research hypotheses for this study were formulated.

Figure 1: Ajzen's theory of planned behaviour



(Bosnjak, Ajzen & Schmidt, 2020, p. 354)

The core of Ajzen's theory of planned behaviour is the effort and motivation for the behaviour (Ajzen, 1991). The model postulates that ones' proclivity is characterised by three drivers.

First, attitude toward the behaviour, in other words, a person's propensity to establish an enterprise is based on an assessment of how advantageous or disadvantageous the career choice is (Magnus, Parker & Hay, 2001).

Secondly, social norms, these are characterised by the individual perceiving support and approval from others (Venter et al., 2010). That is, when people make decisions, especially risky decisions such as entrepreneurship, they ask themselves whether those they hold in high esteem will approve or support their

decision (Ajzen, 1991). Thirdly, perceived entrepreneurial behavioural control, this construct is understood as a person's assessment of how easy or difficult it would be for them to establish an enterprise.

Attitude towards behaviour

This conceptual determinant focuses on what an individual thinks about a particular event or activity, in other words, it is the degree to which a person believes that engaging in a particular behaviour will lead to a favourable or unfavourable outcome (Davids, 2017). For example, in the context of entrepreneurship, one then speaks of the individual's attitude towards establishing a new enterprise and the degree of comfort the individual has in taking on the role of an entrepreneur. The TPB postulates that a favourable attitude toward establishing an enterprise has a favourable influence on entrepreneurial propensity. Thus, it is argued that factors such as growth and a fixed mindset attenuate the relationship between ATB and EI. According to Burnette et al. (2020), individuals with a fixed mindset tend to have negative attitudes toward entrepreneurship, while individuals with a growth mindset tend to have positive attitudes toward entrepreneurship, as it is assumed that a growth mindset is associated with entrepreneurial traits such as risk-taking, resilience, and optimism, which in turn positively affects the individual's attitude. This is consistent with this study's assumption that a growth-oriented mindset strengthens the relationship between GRO and EI. In the above paragraph, the role of cognitive factors such as mindset in explaining EI was addressed, which is an individual-level perspective. Beyond this perspective, GRO and EI in this study need to be considered at a contextual level, as cultural context has been shown to influence EI and GRO. Factors such as GRO and attitudes toward EI cannot be examined without considering context, as the influence of culture and general principles of collectivism persist, particularly in South Africa (Shange, 2017; Mvula, 2018; Zondo, 2022). It is plausible that attitudes toward EI may be positively or negatively influenced by the social stereotypes prescribed to the various GROs. Thus, given the evidence of the influence of implicit person theories and gender role orientation on attitudes toward behaviour, it is reasonable to conduct a study that

examines the interrelationship between all of these variables, as has been done in this work.

Subjective social norms

This determinant considers the influence of support and external pressure to act from significant others (Van Tonder, 2017). Subjective social norms deal with how a person perceives the pressure to act or the support of friends and family in starting a business. It is worth noting that the foundation of this construct is based on the perception of pressure to act or support from people one cares about. Consequently, the TPB model predicts that a person who believes that those he or she highly values are more likely to engage in the same behaviour, or at least support it, is more likely to engage in it himself or herself (Van Tonder, 2017).

In the context of entrepreneurship, this refers to individual perceptions of pressure to act or support received from friends and family in starting a new business. Therefore, the TPB model predicts that an actor who believes that those he highly values are more likely to behave entrepreneurially, or at least support his entrepreneurial actions, is more likely to engage in entrepreneurship himself (Van Tonder, 2017).

Consistent with the supposition that support and external pressures to act influence intentions, research has shown that this conclusion is also shaped by cultural context. For example, in a collectivist culture, the need for support and affirmation from significant others and pressure to act in a certain way is valued more highly. Addis (2008) and Nolen-Hoeksema (2008) also suggest that individuals who have a feminine gender role orientation are also likely to have an increased need for support and affirmation from those they value. This is because feminine gender role identity is also associated with anxiety and fear of rejection by others, so these individuals tend to accommodate others even if it is detrimental to their own needs (Ghaed & Gallo, 2006; Chemaly, 2014). Therefore, it is possible that GRO influences intentions through SSN. Thus in this study, GRO is included in the TPB as a determinant construct of EI. In contrast, in an independent culture where people are much more individualistic, individuals with a masculine gender role

identity may pay less attention to what others think about their actions (Chemaly, 2014). Since masculine gender role identities are associated with extreme independence, a tendency toward self-isolation, and rejection of others, this type of GRO would not then have a positive relationship with SSN.

Perceived behavioural control

This is the final variable added to complete the TPB. The variable focuses on individuals' perceptions of their abilities and the control they believe they have over certain events that affect their well-being. At its core, perceived behavioural control is constructed in two ways. It manifests, firstly, through locus of control and secondly, in the form of self-efficacy (Van Tonder, 2017). Locus of control seeks to explain the amount of control one believes they have over their life; this extends to whether a person attributes this control to internal or external factors (Rotter, 1966; Shapero, 1975; Davids, 2017). It is argued that individuals with an internal locus of control can be identified by how they take control of their lives and how they rationalise successes and failures. These individuals are considered capable of acting because they effectively take action to shape their lives. In instances where their efforts encounter challenges and unfavourable outcomes, they focus on improving their efforts and strategies to leverage their skills. In contrast, the opposite is true for those who hold an external locus of control. These individuals favour idleness, they do not consider themselves active agents responsible for acting on how they want to live their lives, but when they encounter obstacles and consequently experience undesirable outcomes, they see the cause of these events as beyond their control. They blame things like a hidden power that controls everything in the world and factors like destiny or even misfortune (Davids, 2017).

Another argument can be made for a relationship between this variable and the implicit person theories (mindsets). Although individuals may attribute events in their lives to external factors, it is plausible that adopting an incremental mindset instead of a fixed mindset may alter the person's thought patterns and perception of their efforts and abilities (Burnette et al., 2020) and by extension, their intentions. It is important to note that mindsets are malleable and that shifting to a growth mindset may allow the person to see success and failure in relation to their efforts

and view growth or improvement as possible (Burnette et al., 2020). Thus, exploring implicit person theories along with intentions remains a promising gap to explore.

In summary, the more positive a person's attitude toward starting a business, the more they believe it would be easy for them to start a business and the more positive their perception of support and approval from others, the higher their entrepreneurial intentions (Pendame, 2014). This paper extends this argument by suggesting that the interplay between gender-role orientation, implicit person theories and intentions, which remains unexplored, offers an extension of current knowledge, particularly in the context of South Africa. The application of this construct in this study it is as follows, this study argues that congruence between one's individual's GRO and PBC will lead to individuals perceiving themselves as capable of performing entrepreneurial activities.

2.5 Entrepreneurial intent among university students

Nowadays, young people are encouraged to consider alternative career opportunities as unemployment is on the rise. This has become an interesting issue as it is believed that young people have better chances of becoming entrepreneurs. This assertion is justified by the introduction of entrepreneurship education in universities and government interventions aimed at encouraging young people to start new businesses (Davids 2017; Van Tonder, 2017). Despite all these efforts, research reports low entrepreneurial intentions and activities among university students and young people in general (Marlow & Swail 2014). It is, therefore, evident that there is a gap in understanding, explaining and predicting entrepreneurial behaviour among university students.

The entrepreneurial literature attributes low levels of entrepreneurial activity to contextual factors such as training, education, social and financial capital (Marlow & Swail, 2014). This research acknowledges these arguments, but there is a deeper concern with entrepreneurial research, specifically disagreements about the influence of gender on entrepreneurial activity (Perez-Quintana et al., 2017; Snyman 2011; Ramam, 2014).

For decades, the entrepreneurship literature has been flooded with research studies addressing the relationship between entrepreneurial activity and biological sex, however, with this approach, these studies only examined the variations between men and women from a biological perspective. It is fair to say that, for years, most of the research that has looked at the entrepreneurial intention of university students has neglected and ignored the influence of GRO (Langa, 2012; Ratele, 2008).

The argument to investigate the connection between students' GRO and their intentions, rather than biological sex alone, will provide more insights on the intricacies of gender role identities and eliminate a one-size-fits-all approach currently adopted when implementing interventions to improve intentions. Today, these interventions target two groups of individuals, men, and women, when men and women can fall into distinct categories of gender role identities (i.e., masculinity, femininity, androgyny and undifferentiated orientations) (De Freitas, 2015).

The following section will discuss the gender role orientations that one may fall under. In doing so, a broader view of the conceptualisation and development of this phenomenon will be taken and from this discussion the researcher will derive the main hypotheses for this study.

2.6 Gender role orientation (GRO)

This section of the literature will draw on gender role theory to examine the conceptualisation and development of GRO and discuss how the theory was applied and in turn influenced this study. By definition, gender role orientation is more of a psychological characteristic that manifests itself in adherence to and acceptance of social and cultural gender norms (Snyman, 2011; Chemaly, 2014; Liñán, Jaén & Martín, 2020). Gender role orientation can also be explained as the recognition and adoption of gendered characteristics that are usually prescribed by the society in which one lives. In a nutshell the concept is built on the proposition that individuals can fall or oscillate between feminine and masculine gender role orientations (Kachel, Steffens & Niedlich, 2016; Liu, Hsu, Hung, Wu & Pai, 2019;

Vercruysse, 2022; Chen, Tang, Shen, Jiang & Zhang, 2022). In behavioural research literature these two constructs are also referred to as expressive and instrumental gender role orientations (Kachel et al., 2016; Liu et al., 2019), although in this paper, the terms masculine and feminine gender role orientations are retained. Drawings on these definitions gender role orientation remains a way in which people experience the world as our attitudes, choices, and behaviours are significantly influenced by the gender role orientation that one adopts (Kache et al., 2016).

As an extension of the conceptualisation of GRO, this construct is made up of two pillars: masculinity and femininity. The category of masculinity is mainly associated with instrumental attributes. The dominant attributes of this category are independence, assertiveness, and superiority (Wacker, Fischer & Schorlemmer, 2021) therefore, this category is associated with entrepreneurial attributes such as taking responsibility, ownership and leadership (Musara & Nieuwenhuizen, 2020; Liu & Ngo, 2017).

Femininity is mainly associated with expressive attributes. The dominant attributes in this category include: the ability to empathise with others and share their feelings, as well as the ability to care for and protect others; these attributes are seen as crucial in building networks and relationships with others (Wacker et al., 2021; Liu & Ngo, 2017).

These two pillars of GRO will form a central basis of arguments in this study, unpacking how these related to, ATB, SSN, PBC and mindsets in an attempt to predict EI. The section below history and development of GRO.

History and development of GRO

Gender role orientation can be traced back to Freud and Erikson. It is one of the first social and cultural identifications that individuals adopt. For example, in his psychoanalytic theories, Freud postulates that children's gender role attributes are significantly influenced by parental gender role (Shaffer & Kipp, 2009). Furthermore, Freud hypothesises that boys and girls take different paths to align with gender roles (De Freitas, 2015). Boys adapt more to their fathers to detach from their

mothers, while girls adapt more to their mothers while directing their sexual urges toward their fathers. Thus, gender role orientation is present from early childhood.

Ward and Grower (2020) postulate that as boys and girls learn to distinguish between genders, they evaluate which characteristics are consistent with the gender role orientation to which they belong. This categorisation provides a lens through which they view the world and interact with others. For example, once children have adopted a gender role orientation, they are confronted with the behavioural demands prescribed by society (Adamus et al., 2021). They must navigate the world and understand that certain behaviours are considered appropriate or inappropriate based on their gender-role orientation, which is dictated by the society in which they live. The consistency of their behaviour also depends on how much positive reinforcement they receive from significant caregivers (Adamus et al., 2021; Martin & Ruble, 2004).

De Freitas (2015) points out that by the age of seven (7), children begin to realise that gender role orientations are flexible and can be adopted by individuals to varying degrees. Thus, some children adopt their gender roles fluidly. Whether a child continues to apply these gender roles depends on the influence of factors such as culture, socialisation, and the time in which they exist (Martin & Ruble, 2004).

This perspective was further developed by Bandura, who coined the social learning theory, which states that individuals learn their gender roles. This learning is facilitated through observation and imitation of behaviour, after which the behaviour is rewarded or punished (Halpern, 2013). This means that behaviour is learned from important caregivers.

It is important to note that parents are not the only ones who play a role in modelling behaviour. Characters in movies, books and television can serve as a reference point through which a child learns appropriate and inappropriate gendered behaviour (Ward & Grower, 2020). Once learning has taken place, the child will incorporate this new knowledge into their behavioural inventory with the knowledge they already have.

According to social learning theory, it is important to note the role of rewards and punishments in the expression of behaviour. Schneider (2005) and Ward and Grower (2020) assume that parents and authority figures not only have the ability to model gender-appropriate behaviour, but that these individuals also function as a control structure that rewards or punishes the actor (the child) for demonstrating conformity or deviation from desired gender roles. Therefore, the child will be more inclined to engage in behaviours and act in ways that are rewarded and less likely to be punished.

Behaviour modelling also extends to functions outside the home. Individuals also learn to recognise and align themselves with gender roles in relation to specific functions, such as at work. This is also true in entrepreneurship. Despite increasing equal opportunities, research reports low levels of entrepreneurial activity among women (Sarfaraz, Faghih & Majd, 2014; Adamus et al., 2021; Salavou, Chalkos & Lioukas, 2021), which is mainly due to the perception that the characteristics associated with starting a business are masculine and therefore an entrepreneurial path is a prerogative of men (Snyman, 2011; Marlow, 2020; Adamus et al., 2021; Boris & Moloi, 2021). Thus, the typical masculine image in positions of power, ownership and leadership has negatively influenced the attitudes of those who hold feminine gender role orientations towards entrepreneurial activities. Given this backdrop the concepts of femininity and masculinity are discussed next.

GRO as a social construction

From the history and development of GRO, it is clear that GRO is primarily a social construction conceptualised through masculinity and femininity. GRO is a construction in the sense that it has evolved over time through its application in different contexts (Connell & Messerschmidt, 2005; Scott, 2018). It is important to note that gender role orientation is multifaceted because it goes beyond simply prescribing gender roles (Shange, 2017). It builds upon and interacts with the psychological, economic, cultural and political ways in which members of different societies are modelled. Thus, the construction of GRO is achieved through norms of masculinity and femininity (Scott, 2018). These norms determine how people in different societies behave in traditional roles related to economic productivity and

family responsibilities and these norms even shape the physical appearance of members of society (Powell & Greenhaus, 2010; van Breen, Spears, Kuppens & de Lemus, 2017; Liñán, Jaén & Martín, 2022). Feminist theories state that the rigidity of some of these norms has led to structural inequality in society because they reinforce inequalities in power dynamics, as some of these norms are traditionally constructed to favour and give power to either masculine or feminine members of a society (Shange, 2017; Scott, 2018). The construction of GRO also influences the construction and maintenance of certain economic activities that members of a society engage in. For example, the image of careers, including entrepreneurship, has been significantly shaped by gender roles (Datta, 2020). Once this construction of GRO, the image of entrepreneurship, is entrenched, it is not easy to change it, even in cases where it foregrounds the dominance and subordination of others in society (Schippers, 2007; Scott, 2018). In order to influence such a construction, members of a society must constantly negotiate their positions, as the development of GRO is achieved through the acceptance and agreement of the majority of members of a society (Mikkola, 2007).

In cases where changes in the norms and actual construction of gender role orientations are not achieved through acceptance and consent, as has not infrequently been the case in the past, certain members of a society will then attempt to appeal for change and development of such norms, beliefs and constructions through movements and rallies (Shange, 2017; Mensah, 2023). These acts of resistance have indeed played a significant role in the development and progression of GRO over the years, as disciplines such as entrepreneurship have also developed from such positions (Martins-Suarez & Farias, 2017; Suárez & Huerta, 2018; Teixeira, Galvão, Mota-Santos & Carmo, 2021).

As GRO is constructed over time and in different contexts, it is inevitable that it will evolve through the consensus or resistance (Teixeira et al., 2021). For example, today, in a society dominated by image information and the Internet, social media plays a dominant role in the development, reproduction and maintenance of existing gender roles (Nowosenetz, 2008). Therefore, as GRO evolves, there must be socialisation in society of prescriptions or norms related to this evolution. The next

section describes how GRO is socialised in different spatial contexts, even in the process of its development.

Socialisation of GRO

As mentioned earlier, gender role orientation is not automatically adopted, but it is enacted or rather socialised (Teixeira et al., 2021). This socialisation is a process by which members of a society learn and adopt prescribed behaviours that are considered socially acceptable within the context of such a society. While desirable behaviours are encouraged, undesirable behaviours are also discouraged within these societies. To provide context: Historically, people have been socialised to adhere to gender role orientations that are consistent with their biological makeup (Liñán et al., 2022). Although much of this socialisation persists, the world has changed and socialisation today is much more complex (Yarnell, Neff, Davidson & Mullarkey, 2019). This line of categorising people's GRO as per their sex has resulted in gender role contradictions, such as gender role strain and conflict on a broader economic and existential perspective of life, feminist theories argue that this has perpetuated the dominance of certain individuals over others (Mikkola, 2007). Gender role contradictions are discussed in the following section.

As a continuation of the socialisation of GRO, factors such as economic hardship, perceived inequality and human rights advocates now play a critical role in the development of the socialisation of GRO (Shange, 2017). In addition to these factors, institutions and platforms influence expectations of appropriate and inappropriate behaviour. For example, gender roles are socialised through media advertising, religion and culture in general (Nowosenetz, 2008). This assertion is supported by theories of gender relations, which hold that people assimilate through interaction with others, through social conditioning and exclusion in cases where people do not adhere to social norms (Connell, 2020). This occurs in work-related settings as well. This perspective extends the sociation of GRO beyond simple norms but alludes to the importance of structures in which individuals operate and the inherent influence such structures have on people's behaviour (Booth, 2020). Work environments are a persistent spatial context in which certain behavioural patterns are maintained and ascribed to individuals of different gender role

orientations, therefore, these ascriptions affect people's perception of factors such as job preferences, job satisfaction, perceptions of organisational justice and intentions to be entrepreneurial at work and outside of work (Connell, 2020).

Given the inherent differences in psychological cognitions, not everyone resonates with societal prescriptions or at least with the way these givens are socialised and associated with their self-concept. Because not everyone fits the mould of what the normative ideals prescribe, some incongruence occurs between GRO and factors such as career preferences (Acosta, Andrews III, Acosta Canchila & Ramos, 2020). This means that people of certain GRO find themselves in jobs where the stereotypical image of the career does not match their GRO. As a result of this conflict, contradictions arise and if left unresolved, these individuals may resist such prescriptions and embark on a journey of correction (Acosta et al., 2020; Arshad & Shahed, 2019). However, since GRO and its prescriptions are very persistent, this process unfolds over a longer period of time and during this development, GRO strain and conflicts form on a larger scale for some individuals, which we discuss below.

GRO contradictions, GRO strain and conflict

Due to the feeling of incongruence between one's GRO and what is expected or not desired in relation to that GRO, contradictions arise (Arshad & Shahed, 2019). Furthermore, research reports that these contradictions manifest themselves in fears of job mismatch, internal conflict and cognitive strain (Acosta et al., 2020; Arshad & Shahed, 2019). As noted earlier, compliance or noncompliance with these acceptable behaviours is strongly enforced and sometimes punished, primarily through the provision of power, privilege, or exclusion. Gender role strain is more widespread than reported because no individual adheres to the extreme rules regarding their GRO (O'Neil, 2008, 2013, 2015). Gender role strain is influenced by the discrepancy between GRO and normative prescriptions, the pressure to conform and finally, the experience of dysfunctionality from participating in such prescriptions (O'Neil, 2008, 2013, 2015). Another concept that contributes to the understanding of GRO and its connection to factors such as performance, intentions and efficacy, in conjunction with the concept of gender role strain, is

gender role conflict, which is seen as the result of restrictive gender role expectations that conflict with oneself or gender role identity as this conflict is linked to feelings of devaluation and self-concept violation (Hammer & Good, 2010; O'Neil, 2008, 2013, 2015; O'Neil, Wester, Heesacker & Snowden, 2017).

As a result of gender role conflict, devaluation provides an interesting way to understand EI in management studies because devaluation addresses factors of efficacy, attitudes and mindset. In cases where people deviate from prescription assigned to their GRO, they are negatively criticised by others, but more importantly, they also criticise themselves and, in the same breath, develop self-limiting cognitions about their abilities and life prospects, especially within the communities in which they live (Booth, 2020, Shange, 2017). It is reasonable to assume that such limitations in thought also influence their attitudes toward certain occupations, such as entrepreneurship (Datta, 2020). The literature argues that people with limiting and fixed beliefs about their abilities tend to have a lower propensity toward entrepreneurship (Zampetakis et al., 2016). Therefore, it is plausible that individuals who have a feminine gender role orientation may have a negative attitude toward entrepreneurship if the construction of an image of entrepreneurship is prescribed to them that is at odds with their GRO. With this in mind, a summary of GRO in relation to EI follows next.

In summary, based on the study of gender role orientation and how it is socialised and reinforced in society, some people find tasks and occupations that match their gender role orientation more desirable, while others find certain occupations incongruent, leading to the development of GRO strain (Markman & Baron, 2003; Meyer, Tegtmeier & Pakura, 2017; Balachandra, Briggs, Eddleston & Brush, 2019; Anglin et al., 2021). From an entrepreneurship perspective, a career as an entrepreneur was predominantly viewed as a masculine activity, thus reserved for those with a masculine GRO (Shange 2017, Scott 2018). Researchers acknowledge that this portrayal of entrepreneurship has led to gender role strain among entrepreneurs and aspiring entrepreneurs who do not identify with a masculine GRO (Shange 2017, Scott 2018). Further to this, GRO strain affects a person's mindset by negatively influencing their perception of their capabilities and

life prospects, which in turn affects their attitudes and perceived behavioural control related to EI (Booth, 2020). Although gender role orientation defaults still exist, a growing body of evidence suggests that as culture evolves, the image of the entrepreneur must change to include more androgenic and feminine traits (Datta, 2020). Today's entrepreneur is dynamic rather than traditional. Business sectors have also evolved: sectors such as mining, construction, agriculture, and manufacturing are no longer exclusive to a masculine GRO. A pattern of change is emerging, public structures are beginning to accommodate this evolution through policy development (Bowmaker-Falconer & Meyer, 2022) with development and financial support not just targeted at masculine GRO.

Given these developments and changes in gender role norms, it is possible that today individuals with a female gender role orientation have a greater propensity to engage in entrepreneurship. According to Mueller and Dato-On (2008), traditional gender stereotypes are fading in the face of the rise of virtual work, technological developments, and a focus on customer-focused services and solutions. A new set of characteristics is required of entrepreneurs and managers (Ahl, 2006; Goel, Voordeckers, Van Gils & Van den Heuvel, 2013; Murnieks, McMullen & Cardon, 2019; Engel, Ramesh & Steiner, 2020). These new required traits include higher levels of empathy and consideration for the well-being of others, which creates psychological safety for employees (Engel et al., 2020), these traits are often associated with today's entrepreneur. To examine how GRO is related to today's aspiring entrepreneur, GRO is applied in two ways in this study: first, through the guidance of TPB, where GRO acts in accordance with the antecedents of EI through a process of mediation to predict EI. Second, an established relationship between GRO and EI is moderated by mindsets. This study has pointed to the influence of GRO strain in influencing mindsets, with GRO strain leading to a negative and fixed view of one's abilities. Based on this notion of a fixed view of one's attributes, this study argues that mindsets can be improved. Although relatively stable, mindsets are malleable and can be improved through targeted interventions to improve the relationship between GRO and EI.

H1a: GRO is positively related to the EI of university students in South Africa.

The section above unpacked and examined gender role orientation and its respective categories, with a conclusion on how this construct is applied in this study, in that a brief connection was made to the concept of implicit person theories which is explored next.

2.7 Implicit person theory

Implicit person theories (IPTs), also referred to as mindsets, is reviewed in this section and its implications and application to this study are also noted. This concept of IPT has gained attention in psychology and, more recently, in organisational psychology (Levy, 2016; Rothstein & Jackson, 2021); however, there is little literature in the field of entrepreneurship. According to Levy (2016) and Rothstein and Jackson (2021) mindsets are characterised by people's beliefs about flexibility of ability to acquire and apply knowledge and disposition or identity. At the core of implicit person theories are two classifications, fixed and growth mindsets (Carr, Rattan & Dweck, 2012).

Fixed mindsets are also referred to as entity theories and are characterised by the belief that people's ability to acquire, and apply knowledge is fixed and difficult to change (VandeWalle, 2012; Li, Fan & Leong, 2021). On the other hand, proponents of a growth mindset, also known as incremental person theory, view personal characteristics such as ability, and intelligence as malleable (Dweck & Leggett, 1988). According to growth mindset researchers, personal characteristics are malleable and can be changed through interventions (Heslin & VandeWalle, 2008; Li et al., 2021).

What makes implicit person theories more relevant to this study is the argument that they influence attitudes, intentions and behaviour (Levy, 2016; Hendrikx, Schreurs & De Wal, 2022). The discussion of the entrepreneurial literature has addressed the importance of attitudes and intentions in the manifestation of entrepreneurial activity.

Considering the discussion in the previous two sections, it can be inferred that mindset has an impact on attitudes and intentions to behave entrepreneurially. In an attempt to unpack mindsets, research denotes three mechanisms in which implicit person theories can be understood, namely goal importance, perception of effort and attribution of accomplishment and lack of success.

Importance of goals

According to Alayli and Baumgardner (2003) people with a static mindset places great importance on how they carry out, and accomplish tasks, they strive to prove to themselves and others that they are capable or skilled enough. These individuals are less likely to undertake activities in which they may fail (Thompson, 2006) which is particularly unfavourable for entrepreneurship (Chavez, 2016), as entrepreneurship requires individuals to take risks and explore unconventional paths. Moreover, unlike a career in a corporate environment, an entrepreneurial path is not as clear cut or linear. An entrepreneur is constantly required to adapt their strategy and mindset. This level of iteration, proactivity and demand is not a strength for those who have a fixed mindset. Therefore, entrepreneurship-focused goals are less attractive to individuals with a fixed mindset and more desirable to individuals with a growth mindset.

Research reports that few aspiring entrepreneurs make it past the three years (Luthans, Youssef & Rawski, 2011; Thompson, 2006; Bushe, 2019; Mukwarami, Mukwarami & Tengeh, 2020; Naradda Gamage, Ekanayake, Abeyrathne, Prasanna, Jayasundara & Rajapakshe, 2020). Entrepreneurship is challenging, even in ideal circumstances businesses can still fail, so perseverance and a willingness to learn and start again are key to sustaining entrepreneurship. Considering this fact, it is of utmost importance for an entrepreneur to adopt a growth mindset instead of a fixed mindset. Entrepreneurs with a fixed mindset view starting a business as an evaluation of their competence and skills. They tend to prove themselves rather than improve their skills, which leads them to be motivated to avoid opportunities where there is a likelihood of failure. Therefore, when faced with challenges, they may self-sabotage by trying less hard and over-rationalising their failure (Murphy & Dweck, 2010).

The literature argues that entrepreneurs with a growth mindset are more likely to take their nascent company past the three-year mark. Rather than adopting a helpless attitude in the face of daunting goals, individuals with a growth mindset seek to embrace challenging goals and risky opportunities, indicating their need or inclination to learn and master their skills (Luthans, Youssef & Rawski, 2011; Thompson, 2006). This type of mindset is associated with success in entrepreneurship (Chavez, 2016).

Research found that individuals with a fixed mindset avoid challenging and risky opportunities, even if it is at the expense of their career or academic progress, in order to minimise the exposure of skill deficits. This indicates that mindsets influence an individual's intentions to perform or not perform important activities.

Perceived exertion of effort

The core perception among those who hold an entity theory is that people can exert effort, but that effort is a sign of lack of ability and skill. People with a fixed mindset associate high effort with inadequacy. Because these individuals perceive their personality and cognitive repertoire as fixed, any effort to improve them is seen as futile (Keating & Heslin, 2015).

An elevated level of effort is, therefore, undesirable for these individuals. Indeed, these individuals avoid tasks where failure is possible (Keating & Heslin, 2015). Proponents of a growth-oriented mindset, on the other hand, view effort as a crucial factor for continuous learning and development. (Gucciardi, Jackson, Hodge, Anthony & Brooke, 2015).

Attribution of accomplishment and lack of success

Attribution of failure is an important distinction between the two groups (growth and fixed orientated mindset). People with a fixed mindset tend to attribute failures to innate inabilities (Wood, Phillips & Tabernero, 2002; Brez, Hampton, Behrendt, Brown & Powers, 2020; Song, Kim & Bong, 2020). When a task or goal is difficult

to achieve, these individuals tend to experience feelings of doubt regarding their abilities, which then leads to a decrease in their self-efficacy.

In contrast, growth mindset theorists assume that people with a growth orientated mindset look for opportunities to learn even when faced with failure. These individuals attribute success to development and perceive failures as circumstances that allow for learning (Hunter & Scherer, 2009). These attributes then build resilience and a rise in a sense of self-efficacy (Tabernero & Wood, 1999). The rise in self-efficacy allows these individuals to maintain a focus on their methods and plans of action, where if a plan seems inefficient, the individual reviews and modifies their plan accordingly and proceeds with the task at hand. This approach is supported by the entrepreneurial literature. It remains key for entrepreneurs to have self-efficacy and resilience, even when faced with challenging goals or failures.

Changing mindsets

The ability to change mindsets through intervention has become important in leadership, entrepreneurship, and organisational research (Walter, 2016). Even though implicit person theories are considered stable, these theories are dynamic even in suggestive situations such as learning (Carr et al., 2012); therefore, the study of mindsets is crucial to investigate, especially in the field of entrepreneurship.

The application of mindsets in this study is driven by a context of a relationship between GRO and EI, as per arguments made in this paper thus far, the hypothesised relationship between GRO and EI can be complex due to the powerful nature of GRO in influencing attitudes, convictions and perceptions of one's abilities of prospects, this is even more prominent in contexts where notions of cultural conformity are persistence. This is because through the influence of culture and the need for assimilation gender role orientations are vulnerable to contradiction. For example, in cultures or societies in which masculinity is strongly associated with entrepreneurship, those with an alternate GRO may be subjected to experiences of dysfunction, since their GRO is in contradiction with the prevailing image of entrepreneurship. It is argued that this incongruence can lead to negative attitudes

and convictions in relation to entrepreneurship. Therefore, given the validity of growth mindsets in influencing attitudes and behaviours, the construct is also regarded suitable to work in accordance with attributes of TPB, thus, whilst examining the connection between GRO and EI through TPB, this study will account for the effect of mindsets, on this relationship. This effect is anticipated to be positive in strengthening the hypothesised relationship.

2.8 The relationship between GRO, IPT and EI

This study argues of the relevance of the TPB model to examine the hypothesised relationships for this study. Since this research and previous entrepreneurship studies use the theory of planned behaviour to understand entrepreneurial intentions (Liñán & Chen, 2009), the literature review focused on gender role orientation has revealed suitability of GRO and mindsets to work in accordance with this model since several studies have validated the reliability of these constructs to directly and indirectly influence intentions through all the three key constructs of EI (attitude toward entrepreneurial behaviour, social norms, and perceived behavioural control) of the theory of planned behaviour. As stated before, the congruence or incongruence between masculinity and femininity and entrepreneurial stereotypes has the potential to influence one's attitude, subjective social norms, and perceived behavioural control over behaviour. Given the presumed mismatch between femininity and entrepreneurial attributes and the lack of feminine role models in the entrepreneurial sphere, it is possible that those with a feminine gender role orientation may view entrepreneurship as full of barriers and challenges that could impede their progress. This makes the pursuit of entrepreneurship unfavourable for them. Moreover, such perceptions may lead to low perceived behavioural control. Those who align with a feminine gender role may also believe that those they value, such as family and colleagues, view entrepreneurship as a masculine prerogative, which may negatively impact their subjective social norms (Fogliani & Bussey, 2013).

Individuals who see themselves as masculine, on the other hand, might see entrepreneurial pursuits as feasible and beneficial because of a perceived

congruence between masculinity and entrepreneurial characteristics. These individuals might have a stronger sense of behavioural control and positive attitudes toward entrepreneurial pursuits. Moreover, those with a masculine gender role might even perceive that the people in their lives view entrepreneurship as a masculine activity, which in turn would improve their subjective social norms (Fogliani & Bussey, 2013).

At this backdrop, it is apparent that stereotypes associated with career roles can influence how others perceive those roles (Baron et al., 2001; Adamus et al., 2021, Ahl, 2006 & Gupta et al., 2018). Thus, the proposition of GRO in predicting EI in this study.

In view of the above, it can be hypothesised that the relationship between GRO and EI can also be mediated by ATB, SSN and PBC.

H1b: There is a significant association between GRO and EI through the mediating role of ATB

H1c: SSN mediates the relationship between GRO and EI

H1d: There is a significant link between GRO and EI through the mediating role of PBC

To further advance this hypothesis, this paper argues that implicit person theories (mindsets) moderate the strength of the relationship between gender role orientation and entrepreneurial intentions.

Research has demonstrated the direct influence of mindset on self-efficacy and attitude toward a behaviour (Burnette, 2020). This is critical as the entrepreneurial literature highlights the importance of self-efficacy on the propensity to start and run a business.

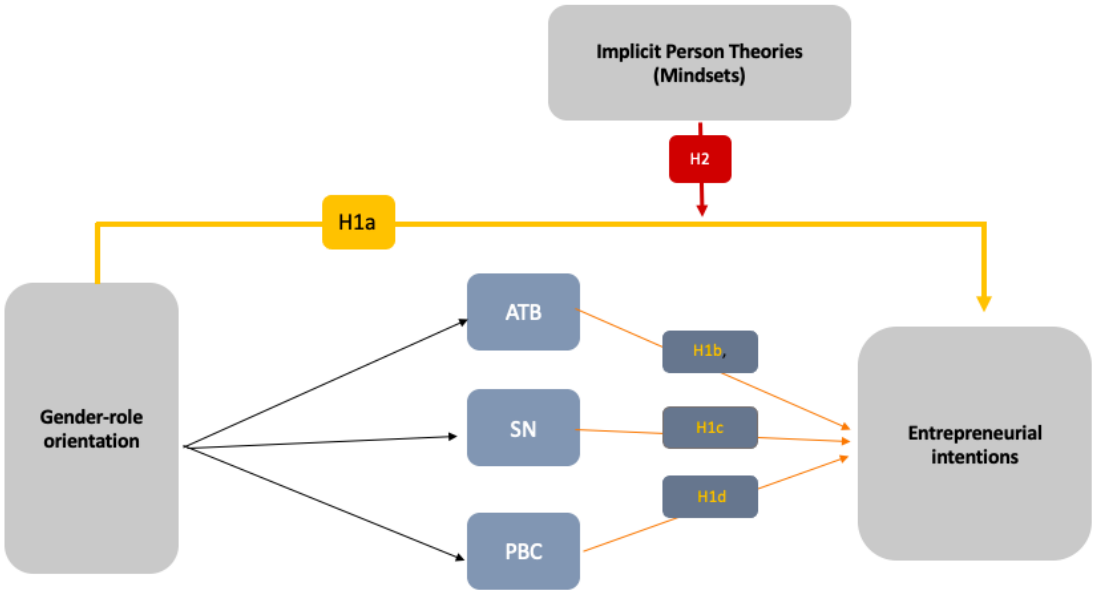
It is reported that the intervention of a growth mindset when self-efficacy is low can improve self-efficacy and overall attitude towards a particular activity. Research suggests that students with a growth mindset remain efficacious even when challenges arise. Therefore, it is plausible that an individual with a growth mindset

who has a gender role orientation that is incongruent with entrepreneurial stereotypes believes that this incongruence will not affect their ability to succeed as an entrepreneur (Yeager, Hanselman, Walton, Murray, Crosnoe, Muller & Dweck, 2019. On the other hand, it is also plausible that an individual who has a gender role orientation that is consistent with entrepreneurial stereotypes might show low entrepreneurial inclination if they have a fixed mindset (Burnette et al., 2020).

Therefore, this study accounts for mindsets through the TPB framework to determine if mindset can influence the strength of the relationship between GRO and EI. Overall, this study has the potential to add to the body of knowledge in the literature on entrepreneurship in South Africa. To the best of the researcher's knowledge, there is no research that examines the influence of mindset on the relationship between GRO and EI. The hypotheses related to mindsets, GRO and EI are listed below:

H2: Mindset moderates the relationship between GRO and EI.

Figure 2: Conceptual framework



Adapted from Ajzen (2019)

2.9 Conclusion of the literature review

In this section, the theoretical background of the study was explained with specific arguments to shed light on the context, history and evolution of GRO, mindsets and EI. In addition, the literature review discussed how each of these focus variables contributes to the understanding of the research problem and questions of this study. In addition, the rationale for adopting the base model for this study was presented and how it accounts for the interaction of the variables of interest in this study to test the proposed hypotheses The gaps in the major theories adopted for this study were detailed along with the resulting possibilities that arise from the hypotheses of the study. As indicated by these hypotheses, there is a gap in research regarding the insufficient exploration of the role of mindset and gender role orientation in influencing differences in entrepreneurial propensity, particularly in South Africa.

Given the formulated hypotheses for this study and their consistency with the base model, the next section describes the research methodology used to answer these propositions and research questions.

CHAPTER 3: RESEARCH METHODOLOGY

This section of the paper outlines the research paradigm that underlies the researcher's argument. First, the research design is discussed, secondly, the process of data collection and the sampling approach are set out and, thirdly, the researcher will outline the research instruments used for this study. Finally, this section of the paper concludes with a discussion of the data analysis and ethical considerations.

3.1 Research methodology/ paradigm

The researcher began this section by explaining beliefs or theories that govern the conduct of this study. Ontology is discussed first, followed by epistemology. Ontology addresses the question of reality and assumptions about reality, in other words, whether reality as it exists in our minds is objective or subjective and epistemology focuses on the forms of knowledge related to that reality and extends to the validity and methods of obtaining that knowledge.

The researcher followed a post-positivist theoretical paradigm. This philosophical perspective is appropriate for this research because it is guided by critical realism, which means that the researcher takes a quantitative and objective approach to research (Trochim, 2006, Kankam, 2019). The ontology or fundamental nature of reality espoused by the researcher states that quantitative studies are not without limitations, especially in studies of human behaviour (Mertens, 2014).

In conjunction with epistemology, the researcher asserts that truth and objectivity of knowledge can be achieved with some degree of probability (Mertens, 2014; Phillips & Burbules, 2000; Kankam, 2019). Therefore, the methods used in this study to acquire knowledge do so with a consideration of a relationship that exists between knowledge and people's perceptions, beliefs and general social reality.

Given the sociocultural context of this study and the fact that GRO and mindsets as variables of interest in this study are socially and culturally influenced and constructed, an absolute or complete capture of reality is not possible, especially

when the object of study is human behaviour and intents such as EI (Galawe, 2017). Instead, it is more appropriate to strive for statistical significance and confidence. In addition, a post-positivist theoretical paradigm applies to this study because of its broad application and suitability for entrepreneurial research. Indeed, this way of thinking about reality and gaining knowledge has contributed to deductive logical reasoning and generalisability when applied in behavioural sciences and some management studies (Galawe, 2017).

3.2 Research Design

This study was quantitative, non-experimental, and cross-sectional, meaning that the variables in this research were not manipulated and the data for this research was collected at a single point in time given the time constraints of the research process (Huck, 2012). To test the hypotheses, the study examined correlations between the variables of interest. This is particularly appropriate for this study as the researcher did not intend to manipulate the independent variable. The computational results of the correlations allowed the researcher to determine the existence of patterns between the constructs and assess the significance of these relationships.

3.3 Population and sample

3.3.1 Population

According to Cooper and Schindler (2014), a research population consists of the entire target population from which the study is to learn and derive findings. The focal population for this investigation is students registered in public tertiary institutions in South Africa.

This consists geographically of nine provinces in the country. According to Stats SA (2021), there are a total of 26 universities in South Africa, categorised as follows: nine of the 26 are technical universities that focus on practical training, then there are six comprehensive universities that focus on academic and vocational

qualifications and the last group consists of 11 traditional universities that offer theory-based qualifications. These universities have a total enrolment of over one million students (Universities South Africa | USAF, 2019).

By focusing on students, greater potential for entrepreneurship can be tapped. Authors such as Mueller and Thomas (2001) and Krueger et al. (2000), advocate the use of university students to collect quantitative data. The authors state that university students are suitable for studying intentions compared to entrepreneurs and general adults because they do not have entrepreneurial expertise and experience, which could bias the results in assessing the level of entrepreneurial intentions. Urban (2010) points out that using university students to study intentions is critical to improving predictive capabilities for entrepreneurial activities.

Another argument for using a student sample to study entrepreneurial intentions is the context, mindset, and time frame in which these students find themselves. For example, students are at a stage where they are thinking about their career options as they complete their studies, so their thoughts may be a robust indicator of career-related steps they will take (Trice, 1991; Zabelina, Deyneka & Tsiring, 2019).

Students are also at a stage where their entrepreneurial inclinations may be influenced by significant others. Research suggests that important attachment figures such as lecturers, mentors and parents have a considerable impact on students' entrepreneurial proclivity as these individuals can act as entrepreneurial role models (Basow & Howe, 1980; Bueckmann Diegoli, San Martín Gutiérrez & García de los Salmones, 2018; Nowiński & Haddoud, 2019; Moreno-Gómez, Gómez-Araujo & Castillo-De Andreis, 2020). Therefore, according to the theory of planned behaviour, the social norm dimension is critical to entrepreneurial inclination. However, it is plausible that using a student sample provides a more complete range of metacognition dimensions compared to real entrepreneurs, as real entrepreneurs may not be as susceptible to the influence of symbolic role models.

Furthermore, the constructs examined in this study (gender role orientation, implicit person theories and intentions) are underpinned by a psychological context and

research on these constructs makes it clear that undergraduates constitute a useful starting point in understanding the psychological underpinnings of executive behaviour (Urban, 2010).

Finally, research based on a student sample provides a more solid foundation for generalisability to populations than research focusing on contextually limited samples, such as managers, directors, and team leaders. A contextualised sample is less appropriate because it is extremely homogeneous and therefore a limitation in its generalisability (Boris, 2010).

University students are enrolled in a variety of courses and qualifications and furthermore, some students are more advanced in their academic and professional careers than others. Therefore, it would be impractical to study all students with these inherent differences. Therefore, to provide a focus in this study, a sampling frame was created.

3.3.2 Sample and sampling procedures

The research hypothesises that students in their final year of university may have a more developed idea of a career path they want to take. Furthermore, for intentions to predict behaviour, it is better to examine intentions at a time when individuals are facing an important decision. The reason for this is that intentions do not happen on a flex, intentions are usually well formulated. Considering the finding that final year students are more likely to be facing a career decision and the fact that a student sample provides a more complete range of metacognition dimensions compared to real entrepreneurs, this makes students an appropriate sample for this study (Pendame, 2014).

Huck (2012) and Cooper and Schindler (2014) define a sample as part of a whole, meaning that a sample exists in the context of a population (final year students) because it represents a portion of the population being studied. Convenience sampling and snowballing approaches were used to collect data. These approaches represent a subjective method of data collection in which not all members of the population have an equal chance of participating in the study, this

approach is also referred to as non-probability sampling. The researcher approached the University of the Witwatersrand in Johannesburg, Gauteng to seek permission to access the target students as participants. The primary population for this paper is final year students in the Gauteng province. Students from the following faculties were eligible to participate Commerce, Law and Management Sciences, Humanities, Agriculture & Environmental Sciences, Health Sciences and Engineering. In addition, the research context and questionnaire were posted on public student forums and social media channels such as LinkedIn, where volunteers could complete or share the link with relevant interested parties.

As mentioned earlier, the researcher used self-completed questionnaires. The questionnaires were accessible to the targeted students on a secure, password-encrypted website (Qualtrics).

According to Field (2009, 2013), Gorsuch (1983) and Kline (1994), the desired minimum sample size is 100 participants. Other research recommends 5-10 observations per variable (Kass & Tinsley, 1979). From this it can be deduced that it is difficult to establish a universal minimum sample size, so much so that Comrey and Lee (1992) posit that a subset of three hundred is favourable. Following these recommendations, including the calculation of the recommended minimum size using the Raosoft application, this study aimed to collect 384 valid responses. The number 384 is considered a good sample for a population of over 20 000.

The sampling frame for this study was as follows: In terms of location, only students enrolled in tertiary institutions in Gauteng province could voluntarily participate in this study. For the reasons already stated, respondents had to be final year students at any of the tertiary institutions in Gauteng. Individuals who already own a business were not eligible to participate. Participants were not excluded based on demographic characteristics (age, gender, religion, or ethnicity).

Table 1: Sampling frame

Attributes	Targeted sample
Full time final year students	384
The following faculties are eligible to participate: Commerce, law and Management Sciences, Humanities, Agriculture & Environmental Sciences, Health Sciences and Engineering.	
Location: Tertiary institutions located in the Gauteng province	
Demographic attributes (18 years and over, gender & ethnicity)	

3.4 The measurement instruments

The study used self-administered questionnaires to collect data. This is consistent with former research on entrepreneurship. Moreover, questionnaires are an effective and efficient way to reach as many people as possible and collect data in a limited period (Field, 2009). Four research instruments were used in this study, namely:

Demographic questionnaire

A demographic questionnaire was formulated to collect participant characteristics for descriptive purposes. Gender, race, and field of study were used as control variables. An interaction between the control variables noted above together with GRO was examined.

Entrepreneurial Intentions

The entrepreneurial intentions instrument developed by Lián and Chen (2009) was used in this study to assess entrepreneurial intentions. The instrument consists of 18 items that can be answered on a seven-point scale ranging from "strongly disagree" (1) to "strongly agree" (7).

Six (6) items were used to assess intentions (α = 0.94), four (4) individual items were used to measure attitude toward behaviour (α = 0.89); four (4) other items to measure subjective social norms (α = 0.77); and another four (4) for perceived behavioural control (α = 0.88). Overall, the instrument produced an internal consistency reliability of Cronbach's alpha of α = 0.87), which is high reliability as the coefficient is above 0.70 (Cooper & Schindler, 2011, Hair, Risher, Sarstedt & Ringle, 2019).

Entrepreneurial preference

To measure a person's preference for an entrepreneurial path, participants were presented with short descriptions of entrepreneurial archetypes who are on either a social or commercial entrepreneurial path. After reading the brief descriptions of these archetypes, participants were asked to express their preference on a scale of zero (minimum) to 100 (maximum). For example, if a participant had a strong preference for social entrepreneurship, they could give it a rating of 80 or 100 percent, and the remainder was assigned to the alternative option, with the allocation split between the two options (social or commercial) totalling 100 percent.

Social entrepreneur: ___%

Commercial entrepreneur: ___%

Gender role orientation; the traditional masculinity-femininity (TMF) scale

GRO was measured using the TMF scale developed by Kachel et al. (2016). The instrument is composed of 6 questions. The question essentially captures the degree to which one characterises oneself as either feminine or masculine. The scale uses the following anchors: one (1. very masculine) to seven (7. very feminine). For this scale, participants had to indicate the degree to which they assigned themselves to one of the two gender role orientations. For example, a rating of one (1) indicates a high degree of association with a masculine GRO. In contrast, a rating of seven (7) indicates a stronger association with a feminine GRO (Kachel et al., 2016).

Participants could only make a choice by providing a low and a high score for the same item. The Cronbach's alpha value for this scale was α = 0.94 (Kachel et al., 2016). This is a high and accepted level of internal consistency as the value is above 0.70 (Cooper & Schindler, 2011, Hair et al., 2019).

Implicit person theories

Levy and Dwecks' (1997) implicit person theory instrument was used in this study. The instrument consists of 8 items that capture the nature of the person at a general domain level. The Instrument is also referred to as beliefs about human nature because the scale measures respondents' beliefs about areas of personality and ability (Levy, 2016).

The scale consists of eight (8) items. Half of the items assess incremental theories, also known as growth mindset; the other four (4) items assess entity theories, now known as fixed mindsets. These are rated on a seven-point Likert scale (1 = strongly disagree, 7= strongly agree).

For the fixed mindset items, the scale was reversed, and an average of all 8 items was calculated to create a composite scale for mindset. A participant was classified as growth-oriented if his or her average score for all items was above 3.5, whereas participants with an average score of less than 3.5 were classified as having a fixed mindset.

Cronbach's alpha values have already been obtained for the scale: 0.90, 0.92 and 0.94 (Levy, 2016). These are significantly high reliability values.

3.5 Procedure for data collection

Once ethical approval was granted for this research project, the process of data collection commenced. The researcher sought permission to distribute the survey to final year students at various universities. Alternatively, but in addition, the researcher shared an online link to the questionnaire with potential participants. This link was distributed through various social media channels such as, Twitter and LinkedIn. The study targeted final year undergraduate groups on social media.

Social media is best suited for survey dissemination as it allows for quick and gradual dissemination of information among smaller fraternities and larger social networks. The process of analysis began shortly after data collection.

3.6 Data analysis and interpretation

In the data analysis of this study, various statistical methods were used to answer the research questions posed in this study. First, the sample statistics was calculated to develop the appropriate analysis for this study.

Then descriptive statistics was calculated. This type of analysis provides a meaningful understanding of the data. For example, the analysis calculates the dispersion, mean and demographic frequencies in relation to the sample, which helps to explain, interpret, and summarise the data (Cooper & Schindler, 2011).

It also calculates skewness, kurtosis coefficients and Kolmogorov-Smirnov statistics, which are critical to establishing normality of the data, which is a fundamental assumption in parametric testing (Cooper & Schindler, 2011).

Confirmatory factor analysis was performed to examine and deduce the factor structure of the scales and establish construct validity. The internal consistency of the scales was also calculated to determine the reliability of the measures. For a more detailed analysis, inferential statistics was computed; a Pearson correlation was performed to derive the interaction between GRO and EI, and structural equation modelling (SEM) was also employed as a statistical technique in this research, a formative model with bootstrapping was applied to the final pruned model to evaluate the hypotheses. The study followed the moderation guidelines established by Baron and Kenny (1986). As stated by these researchers, a moderation effect can be either positive or negative, that is, it can strengthen the strength of a relationship between variables and at the same time a moderator can weaken the intensity of a variable-to-variable relationship.

To explain a moderation effect using Baron and Kenny's (1986) moderation principles, a relationship between EI and independent variables should manifest

itself through three paths, for example, the influence of GRO (path 1), the influence of the person's implicit theories (path 2), and the product of paths 1 and 2 (path 3) (GRO *implicit person). If Path 3 (GRO *implicit person theories) is significant, hypothesised moderation is assumed to be present.

3.7 Validity and reliability

Since scales with multiple items are used in this study to measure constructs, it is important to decipher the accuracy and consistency of these scales, that is, the researcher observed whether the scales measure what they were supposed to measure.

3.8 Validity

This concept refers to the accuracy and validity of the measurement. It focuses on the extent to which a scale is measuring what it is designed or intended to assess. The concept is important to ensure that the scales do not measuring confounding factors that the researcher did not intend to study. In this study, three types of validity were examined. They are external validity, internal validity, and construct validity, which remained relevant to the conduct of this research.

3.8.1 External validity

According to Beverland and Lindgreen (2010), external validity is the potential of the results of the study to remain viable and applicable in different environments, geographical locations and at various times. This point is about the generalisability of the results of the study in different contexts. For this study, the researcher collected the sample data in different universities and among students with different qualifications and demographic characteristics.

3.8.2 Internal and construct validity

Internal validity considers the purpose, focus and accuracy of the research instrument. It examines the degree to which a scale consistently measures what it purports to assess. Therefore, the results of the study should be the result of the factors examined in this study and not the result of the effects of confounding variables (Weiner, 2007). To maintain internal validity in this study, the researcher administered the same questionnaire to all students during the same period of data collection.

It is worth mentioning that this study used already existing and validated instruments, which also helps to maintain positive internal validity. Complementing this, the researcher's collected a total of 415 valid responses. According to Comrey and Lee (1992), this is a good sample and Galawe (2017) points out that a larger sample contributes to better internal validity.

Construct validity is concerned with the items that form the theoretical constructs of a study, as the items must measure what the construct intends to measure (Cooper & Schindler, 2008). This construct can be further broken down into three lenses. First, through convergent validity, secondly, through divergent validity and thirdly, through discriminant validity.

Convergent validity is concerned with whether a construct is composed of its measurement items, that is, the items that relate to a particular construct should intuitively converge within that construct. In this study, factor analysis is calculated to assess convergent validity. Divergent validity examines the degree to which constructs that are not related are not intuitively perceived as belonging together (Field, 2013). This is related to discriminant validity, where an instrument must discriminate by showing the uniqueness of the constructs. Discriminant validity is also represented by low cross-loadings between factors. This means that the association of items measuring different constructs should be low; statistically, this value must be less than 0.3. Ideally, the relationship between discriminant factors must be lower than the relationship between convergent variables (Field, 2013).

According to Field (2009), it is likely that one can assess reliability without validity. However, one cannot assess validity without reliability, so it is quite basic to assess both.

3.9 Reliability

Reliability refers to the consistency of measurement over repeated use. The degree to which a research scale can be administered multiple times in different locations and consistently produce the same results over a period. Thus, the focus here is on the consistency of results over time. In addition, the measurement scales used in this study have been tested and validated in previous studies. These scales have demonstrated good internal consistency, as they all have a Cronbach's alpha greater than 0.8. This is a good value for internal consistency reliability. According to Hulk (2012), 0.7 is the acceptable and minimum Cronbach's alpha value.

3.10 Ethical considerations

The researcher obtained ethical approval from the University of the Witwatersrand Human Research Ethics Committee before collecting data for this study. Potential participants received an information sheet explaining the purpose and procedures of the study in exchange for their consent. Participants in the online study were informed that completion and submission of the survey constituted consent and that they could withdraw their participation at any time prior to submitting the survey.

Potential participants were informed on the participant information sheet that anonymity and confidentiality would be maintained and that all responses would be summarised and grouped to maintain anonymity. In addition, participants were informed that only the researchers and their supervisor would have access to the data and that it would be used for academic purposes only. Potential participants were also informed that participation in the study was completely voluntary and that they would not gain any advantage or disadvantage for participation (Cooper & Schindler, 2008).

CHAPTER 4: PRESENTATION OF RESULTS

4.1 Introduction

In this section of the thesis, the results of this research are presented. The results are determined by the research methodology in Chapter 3 of this paper. The results are presented in the form of graphs and tables to facilitate readability and interpretation.

Data were collected through online questionnaires that were completed by the respondents themselves. The questionnaire consisted of four sections, the demographic section, the entrepreneurial intentions scale and the gender role orientation (GRO) and implicit person theories (mindset) scale.

The demographic characteristics of the participants were recorded in detail to observe the distribution and emerging patterns within the data. In addition, the validity and reliability of the scales were tested before calculating the statistical relationships between the variables of interest.

4.2 Demographic profile of respondents

After data collection, a total of 430 responses were collected. After reviewing and cleaning the data, the sample for this study consisted of 415 usable data for analysis.

4.2.1 Respondents' gender

Based on the total number of 415 students, 56% considered themselves female, 39% considered themselves male, 3% considered themselves non-binary, 1% considered themselves transgender women and another 1% considered themselves gender fluid.

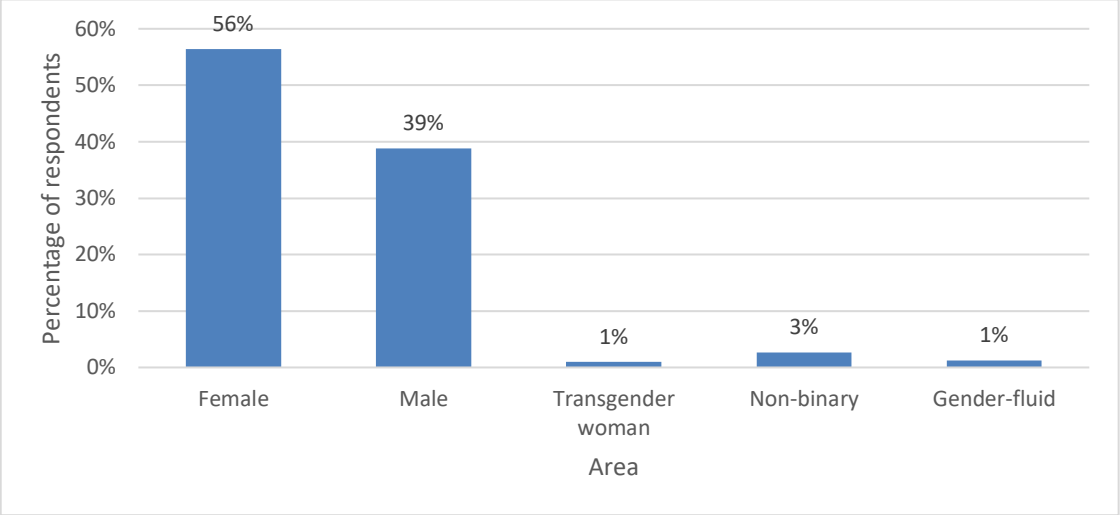


Figure 3: Respondents' gender

Most of the respondents in this study were male (61%) and the remainder of the sample consisted of females (39%).

4.2.2 Respondents' race

A sizeable portion of the sample was black (78%), followed by white (10%) and coloured (7%).

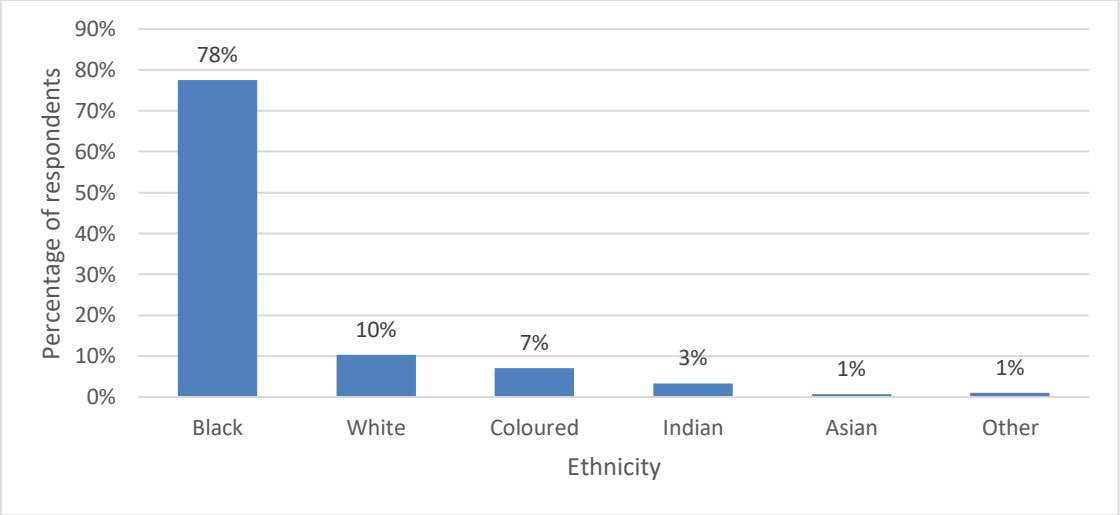


Figure 4: Respondents' race

4.2.3 Respondents' area of study

The students' fields of study were identified, and a considerable proportion of the sample was in commerce and management (43%), followed by humanities (30%) and engineering (12%).

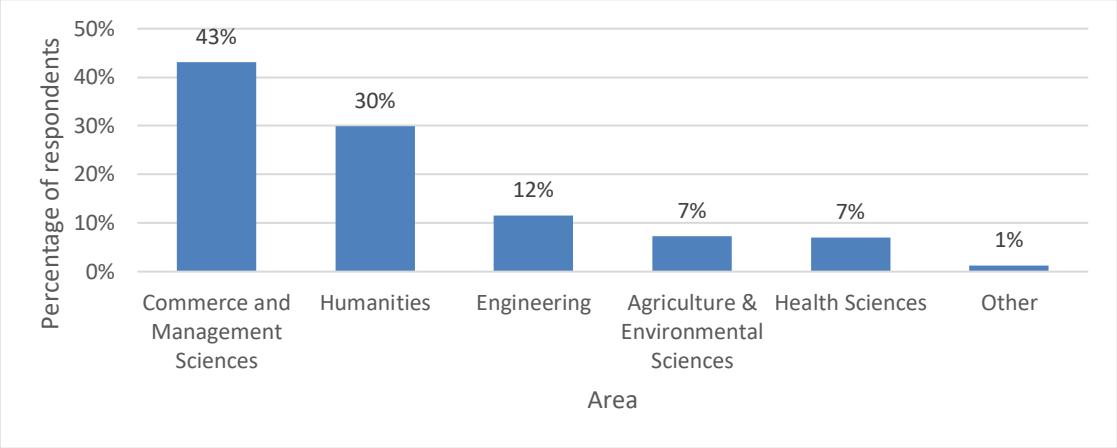


Figure 5: Respondents' area of study

Table 2 shows a summary of the demographic data.

Table 2: Consolidated table of demographics

Variable	Option	Frequency	Percent
Gender	Male	161	39%
	Female	234	56%
	Transgender woman	4	1%
	Non-binary	11	3%
	Gender-fluid	5	1%
Ethnicity	Black	322	78%
	White	43	10%
	Coloured	29	7%
	Indian	14	3%
	Asian	3	1%
	Other	4	1%
Area Study	Commerce and Management Sciences	179	43%
	Humanities	124	30%
	Engineering	48	12%
	Agriculture & Environmental Sciences	30	7%
	Health Sciences	29	7%
	Other	5	1%

4.3 Descriptive analysis of scales

Table 3 shows the distribution of responses for ATB. The items of the scale together resulted in a mean score of 5.39, which means that the participants agreed with these items. Item two (2), which captures the level of fulfilment one would derive from pursuing entrepreneurship, yielded the highest score (mean = 5.49). 58% of respondents agreed or strongly agreed with this item. This was followed by item one (1), which captured the attractiveness of being an entrepreneur (mean = 5.38). 53% of respondents agreed or strongly agreed with this item. The item that also received a high score was item three (3), which captured participants' personal choice of an entrepreneurial career over other professional prospects (mean = 5.36). 51% of participants fairly and strongly agreed with this item. Overall, the mean of all items was above 3.5, which is the midpoint of the scale and indicates general agreement with all ATB items.

Table 3: ATB descriptive statistics

	Strongly disagree	Disagree	Somewhat disagree	Neither Agree nor Disagree	Somewhat agree	Agree	Strongly agree	Mean	SD
Rating	1	2	3	4	5	6	7		
ATB_1 A career as an entrepreneur is attractive to me	2%	3%	5%	11%	26%	30%	23%	5.38	1.41
ATB_2 Being an entrepreneur would give me great satisfaction	1%	4%	3%	11%	26%	33%	24%	5.49	1.31
ATB_3 Among the various career options, I would prefer to be an entrepreneur	2%	4%	3%	12%	29%	30%	21%	5.36	1.36
ATB_4 Being an entrepreneur has more advantages than disadvantages for me	0%	4%	3%	14%	29%	28%	21%	5.35	1.31

Overall, respondents agreed with the items in the SNN scale, as all items had a mean score of 3.5, which is the midpoint of the scale. The item that scored highest on the SSN scale captured participants' perceptions that their friends would approve of their decision to start a business (mean = 5.88). 69% of participants agreed or strongly agreed with this item. This was followed by the rating for item two (2), namely that friends would value entrepreneurial careers more than any other career

(mean = 5.36). 49% of respondents either agreed or strongly agreed with this item. The third item assessed was family endorsement of the choice to establish a business (mean = 5.20). 42% of respondents demonstrated either agreement or a strong agreement with this item.

Table 4: SSN descriptive statistics

	Strongly disagree	Disagree	Somewhat disagree	Neither Agree nor Disagree	Somewhat agree	Agree	Strongly agree	Mean	SD
Rating	1	2	3	4	5	6	7		
SSN_1 My immediate family values the entrepreneurial career more than any other career	6%	7%	10%	22%	24%	19%	12%	4.56	1.64
SSN_2 My friends value the entrepreneurial career more than any other career	1%	3%	3%	15%	29%	31%	18%	5.33	1.28
SSN_3 My immediate family would approve of my decision to start a business	1%	3%	5%	16%	32%	24%	18%	5.20	1.34
SSN_4 My friends would approve of my decision to start a business	0%	1%	1%	9%	20%	38%	31%	5.88	1.02

Similar to ATB and SSN, respondents showed general agreement with the PBC items, as indicated by scores above the scale mean (3.5). Table 5 shows the results for this construct. Willingness (being prepared) to start a viable business (mean = 4.47) was the highest scoring item. 54% of respondents reported agreement or strong agreement with this item. This was closely followed by item four (4), If I were to establish a new entity, my prospects of success would be high. This item had a mean score of 5.45 and 51% of respondents either agreed or strongly agreed with this item. The third rated item was item number 3, which captured the participants' knowledge of the pragmatic details required to set up a business (mean = 5.33). 49% of participants demonstrated either agreement or a strong agreement with this item.

Table 5: PBC descriptive statistics

	Strongly disagree	Disagree	Somewhat disagree	Neither Agree nor Disagree	Somewhat agree	Agree	Strongly agree	Mean	SD
Rating	1	2	3	4	5	6	7		
PBC_1 I am prepared to start a viable business	1%	4%	3%	9%	29%	31%	23%	5.47	1.31
PBC_2 Starting a business and keeping it viable would be easy for me	1%	4%	3%	18%	29%	31%	14%	5.19	1.27
PBC_3 I know the practical details necessary to start a business	2%	3%	2%	13%	32%	33%	16%	5.33	1.27
PBC_4 If I were to try to start a business, I would have a high probability of success	0%	1%	2%	19%	27%	30%	21%	5.45	1.16

There was also agreement with all items on intention to start a business (entrepreneurial intention), with all items scoring above 3.5, the midpoint of the scale. Item 6, i.e., having an intense proclivity to launch a company in future (mean = 5.91, was the highest scoring item. 72% of the participants agreed or strongly agreed with the item. Followed by item 4, which captured one's possession or display of resolve to launch a company in future (mean = 5.78), 67% of respondents reported either agreement or strong agreement with this item. Item five (5) was rated third highest with a mean of 5.60. 62% of participants gave a favourable response, in that, they either hold an agreeable or a strong agreeable position that they are thinking very seriously about starting a business after they finish their studies. The complete representation of these results is shown in Table 6.

Table 6: EI descriptive statistics

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree	Mean	SD
Rating	1	2	3	4	5	6	7		
EI_1 I am willing to do anything to become an entrepreneur	2%	2%	6%	11%	22%	33%	24%	5.45	1.38
EI_2 My professional goal is to become an entrepreneur	1%	4%	5%	15%	26%	30%	19%	5.27	1.38
EI_3 I will make every effort to start and run a business	0%	3%	3%	11%	23%	36%	23%	5.53	1.28

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree	Mean	SD
Rating	1	2	3	4	5	6	7		
EI_4 I am determined to start my business in the future	0%	1%	3%	9%	20%	35%	32%	5.78	1.19
EI_5 I am thinking very seriously about starting a business after I finish my studies	1%	4%	3%	9%	20%	32%	30%	5.60	1.38
EI_6 I have a firm intention to start a business some day	1%	2%	2%	7%	15%	32%	40%	5.91	1.27

The mindset (implicit person theories) items were rated on a scale of strongly (1) disagree to strongly agree (7). The results are presented in Table 7. The items on mindsets 1 through 4 represented a fixed mindset, while the items on mindsets 5 to 8 represented a growth mindset. Respondents agreed with all four growth mindset questions, with mean scores all above 3.5 (scale mean). On the other hand, respondents disagreed with the fixed mindset items (mindset 1 - mindset 4), these had a mean score of less than 3.5. These results indicate that participants in this study showed general agreement on all 8 items, suggesting an orientation toward a growth-oriented mindset.

Table 7: Implicit person theory (Mindset) descriptive statistics

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree	Mean	SD
Rating	1	2	3	4	5	6	7		
Mindset 1. The kind of person someone is, is something very fundamental about them and cannot be changed very much*	21%	21%	25%	18%	11%	3%	0%	2.87	1.42
Mindset 2. People can do things differently, but the important parts of who they are cannot really be changed*	15%	28%	27%	17%	11%	3%	0%	2.90	1.32
Mindset 3. Although I hate to admit it, you cannot teach an old dog new tricks. People cannot really change their deepest characteristics*	18%	24%	26%	20%	10%	2%	1%	2.90	1.38
Mindset 4. Every person is a certain kind of person and there is not much you can do to really change that*	16%	21%	31%	23%	6%	2%	0%	2.91	1.27
Mindset 5. Every person, no matter who they are, can significantly change their basic characteristics.	0%	1%	3%	4%	28%	33%	30%	5.79	1.09

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree	Mean	SD
Rating	1	2	3	4	5	6	7		
Mindset 6. People can always significantly change the kind of person they are	0%	1%	3%	4%	29%	33%	28%	5.75	1.10
Mindset 7. No matter what kind of person someone is, they can always change a great deal.	0%	0%	0%	3%	25%	43%	30%	5.98	0.86
Mindset 8. All people can change even their most basic qualities.	0%	0%	1%	3%	25%	39%	32%	5.99	0.87

The scale was reversed for the fixed item shown in Table 7 and an average was calculated for all eight items to compute a composite scale for mindset. Based on the mean of all items, a respondent with a mean greater than 3.5 was classified as growth mindset-oriented, while respondents with a mean less than 3.5 were classified as having a fixed mindset. The results based on this binary classification are shown in Figure 9. It can be seen that 98% of the respondents had a growth-oriented mindset, while only 2% had a fixed mindset.

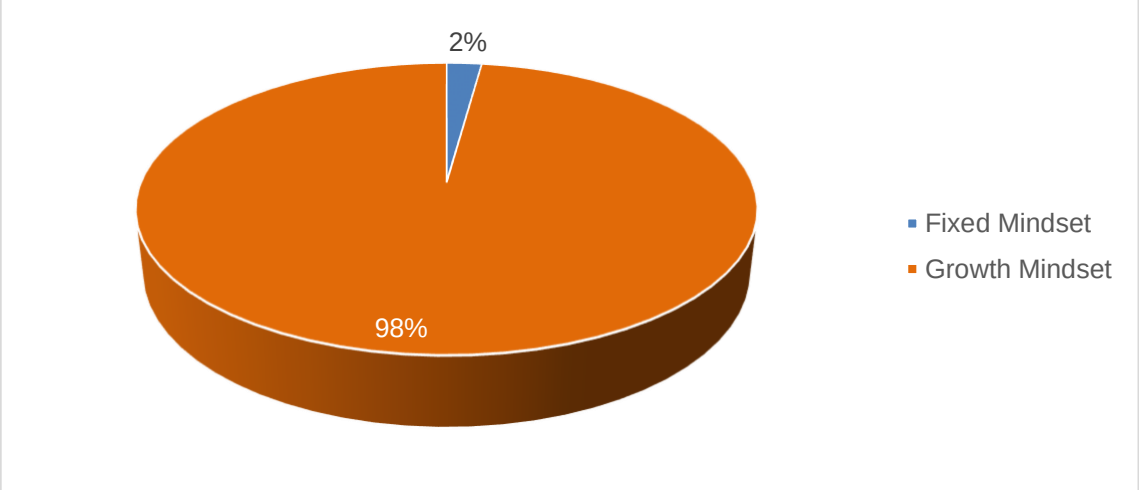


Figure 6: Mindset classification

GRO items were assessed with two opposite ends of the scales represented as very masculine (1) to very feminine (7). The results are presented in Table 10. The respondents rated the items on the feminine side of the scale than on the masculine side, as indicated by the mean scores, all greater than 3.5 (midpoint of the scale).

Table 8: GRO descriptive statistics

	Very masculine (1)	2	3	4	5	6	Very feminine (7)	Mean	SD
GRO_1 I consider myself to be ...	12%	10%	12%	18%	19%	18%	11%	4.20	1.87
GRO_2 Ideally, I would like to be…	7%	9%	14%	16%	21%	19%	13%	4.42	1.77
GRO_3 Traditionally, my interests would be considered as…	7%	9%	13%	22%	23%	18%	8%	4.29	1.66
GRO_4 Traditionally, my attitudes and beliefs would be considered as	7%	10%	13%	18%	23%	19%	9%	4.36	1.68
GRO_5 Traditionally, my behaviour would be considered as…	8%	9%	15%	13%	23%	21%	10%	4.37	1.76
GRO_6 Traditionally, my outer appearance would be considered as…	8%	10%	12%	14%	18%	21%	17%	4.53	1.87

An average score for all GRO items was calculated for each respondent. A respondent was designated into a feminine GRO category if they had a mean score greater than 3.5 and a masculine GRO if they had a mean score less than 3.5. The results based on this binary classification are shown in Figure 10. It can be seen that 70% of the respondents classified themselves as having a feminine gender role orientation, while the other 30% had a masculine gender role orientation.

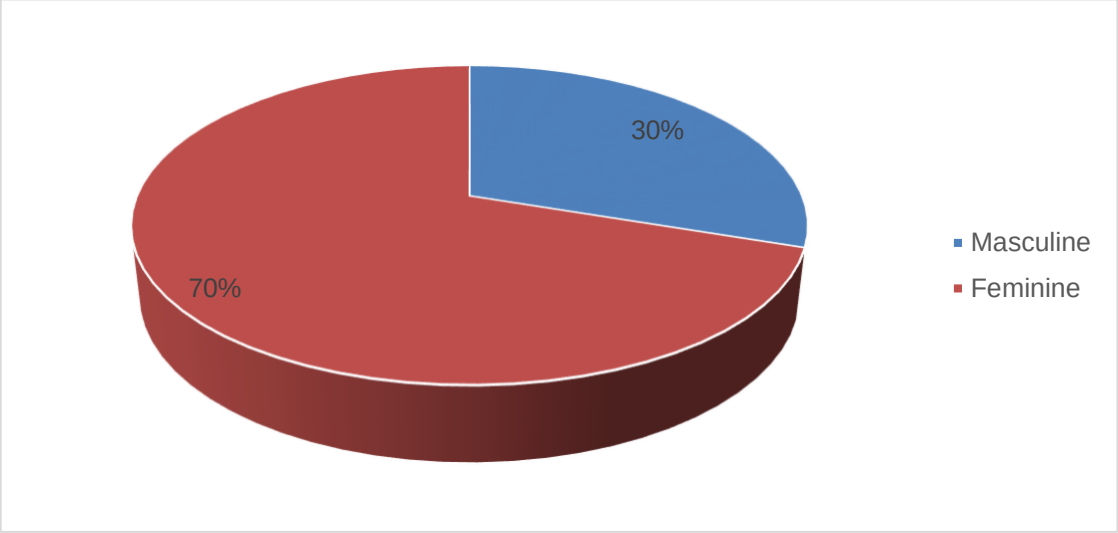


Figure 7: GRO classification

4.3.1 Validity of the constructs

SmartPLS was employed in this research to evaluate the degree to which the model was valid and reliable, with items being reflective of the latent constructs. The factor loadings are shown in Table 9. The GRO construct was dummy coded, in other words, if a respondent held a masculine gender role orientation, then the respondent was expressed or labelled as 0 and if they held a feminine gender role orientation, then the respondent was labelled or coded as 1. Thus, the factor had one item. The same was done for the construct mindset, with 0 classified as fixed mindset and 1 as growth mindset. Research items that recorded factor loadings below the threshold of 0.4 were excluded from the constructs.

Table 9: Outer loadings

	ATB	EI	Mindset	Moderating effect 1 *GRO→EI (Moderated by Mindset)*	PBC	SSN	GRO
ATB_1	0.759						
ATB_2	0.812						
ATB_3	0.869						
ATB_4	0.802						
EI_1		0.829					
EI_2		0.840					
EI_3		0.815					
EI_4		0.790					
EI_5		0.824					
EI_6		0.806					
Mindset Classification			1.000				
PBC_1					0.840		
PBC_2					0.731		
PBC_3					0.742		
PBC_4					0.732		
SSN_1						0.621	
SSN_2						0.467	
SSN_3						0.663	
SSN_4						0.665	
GRO * Mindset				1.000			
GRO Classification							1.000

The results presented in Table 9 show how all items loaded. Table 9 shows that the research items score highly within the factors to which they belong. This is supported by the fact that all factor loadings exceed a threshold of 0.4. A view of the confirmatory factor analysis (CFA) model is depicted below.

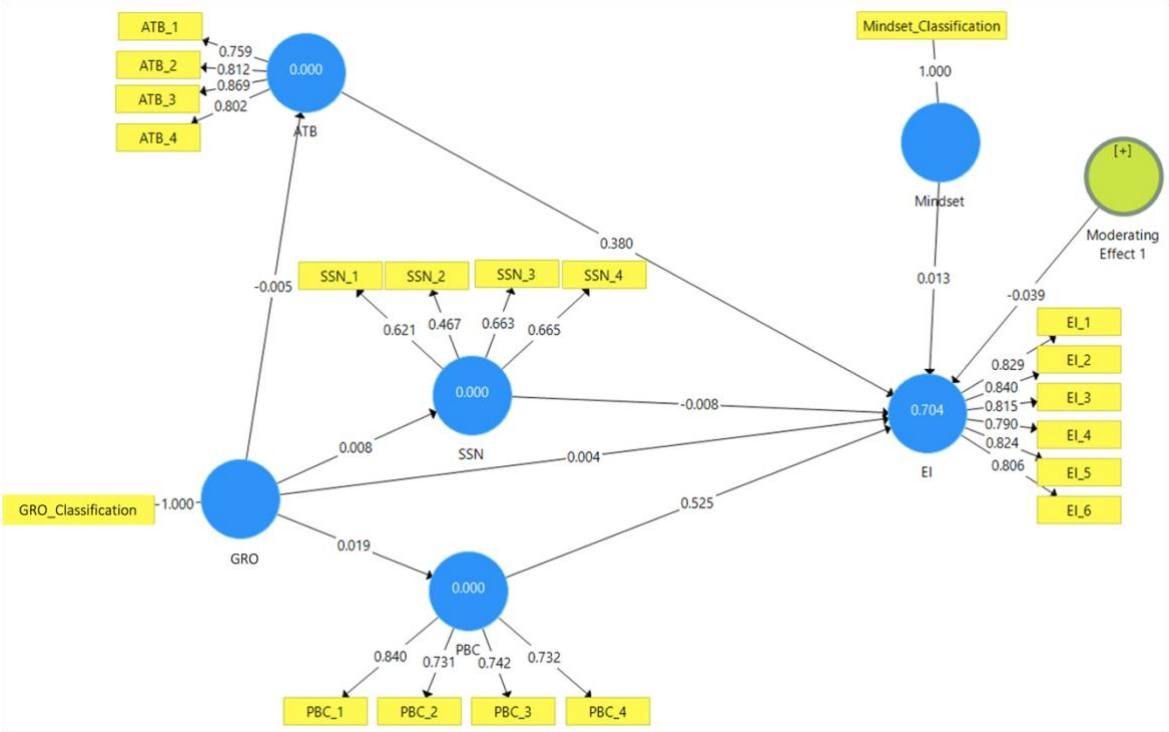


Figure 8: CFA Model

Construct reliability and validity for the hypothesised model are presented in Table 10. To derive the reliability of the constructs, the test of Cronbach's alpha coefficient was performed. This evaluation showed good internal consistency for all constructs except the SSN construct; all other constructs had a reliability value greater than 0.70. There was a minor plight with the convergent validity of the SSN construct, as the value of the average variance extracted (AVE) was slightly below the minimum acceptable value of at least 0.4.

After a closer examination of these items, it was confirmed that it was not appropriate to delete or separate these items, as this would not improve the composite score of the higher order construct. It was decided to keep all items in the constructs because their composite score is above 0.60, according to Hair et al. (2019) this score is considered valid in academic works are in interpretive by design. In addition, these items have been reviewed and validated in a variety of contexts, and the instrument is recognised worldwide.

Divergent validity was generally present, as the diagonal elements of the Fornell-Larcker criterion were greater than the nondiagonal correlations with other constructs, with the exception of SSN, which was correlated with the items of the other constructs, as shown in Table 11.

Table 10: Construct reliability and validity

	Cronbach's alpha	rho_A	Composite reliability	Average variance extracted (AVE)
ATB	**0.884**	**0.887**	**0.885**	**0.658**
EI	**0.924**	**0.924**	**0.924**	**0.669**
Mindset		**1.000**		
Moderating Effect 1 *GRO →EI (Moderated by Mindset)*	**1.000**	**1.000**	**1.000**	**1.000**
PBC	**0.849**	**0.850**	**0.847**	**0.582**
SSN	**0.701**	**0.710**	**0.699**	**0.372**
GRO		**1.000**		

Table 11: Fornell-Larcker Criterion

	ATB	EI	Mindset	Moderating Effect 1 *GRO →EI (Moderated by Mindset)*	PBC	SSN	GRO
ATB	0.811						
EI	0.756	0.818					
Mindset	0.018	0.010					
Moderating Effect 1 *GRO →EI (Moderated by mindset)*	-0.033	-0.079	-0.448	1.000			
PBC	0.724	0.795	-0.060	-0.025	0.763		
SSN	0.717	0.610	0.013	0.048	0.662	0.610	
GRO	-0.005	0.015	0.083	-0.059	0.019	0.008	

4.4 Results pertaining to the hypotheses

In this work, structural equation modelling was employed for analysis. This technique was adopted to estimate a string of relationships. These included a focus on the following elements: first, the measurement model, which assesses latent items and their measures. Second, the structural model, which focuses on the associations among latent factors to determine the proportion of variation that can either be attributed to predictor variables in the model or error variance that cannot be explained.

Descriptive statistics and Pearson's correlation

Pearson correlation was performed first to evaluate different relationships independently. The results are shown in table 12 below.

Table 12: Descriptive statistics and Pearson's correlation

Construct	Descriptive statistics		Pearson's correlation					
	Mean	Std. deviation	GRO	Mindset	ATB	SSN	PBC	EI
GRO	.70	.46	1					
Mindset	.98	.15	.083	1				
ATB	5.40	1.16	-.006	.015	1			
SSN	5.24	.96	.004	.016	.562**	1		
PBC	5.36	1.04	.018	-.056	.626**	.512**	1	
EI	5.59	1.12	.014	.009	.684**	.487**	.704**	1

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

- There was a strong, positive and significant relationship between ATB and EI ($r = 0.684$, p-value < 0.01).
- There was a moderate, positive and significant relationship between SSN and EI ($r = 0.487$, p-value < 0.01).
- There was a strong, positive and significant association between PBC and EI ($r = 0.704$, p-value < 0.01).

- There was a weak positive but non-significant relationship between mindset and EI (r = 0.009, p-value > 0.05).
- There was a weak positive but non-significant relationship between GRO and EI (r = 0.014, p-value > 0.05).
- There was a weak positive but insignificant relationship between ATB and mindset (r = 0.015, p-value > 0.05).
- There was a weak negative but insignificant relationship between ATB and GRO (r = -0.006, p-value > 0.05).
- There was a weak positive but non-significant relationship between SSN and mindset (r = 0.016, p-value > 0.05).
- There was a weak positive but insignificant relationship between SSN & GRO (r = 0.004, p-value > 0.05).
- There was a weak negative but insignificant relationship between PBC & mindset (r = -0.056, p-value > 0.05).
- There was a weak positive but insignificant relationship between PBC and GRO (r = 0.018, p-value > 0.05).

The SEM model

A formative model with bootstrapping was applied to the final pruned model to evaluate the hypotheses. The model is shown in Figure 12.

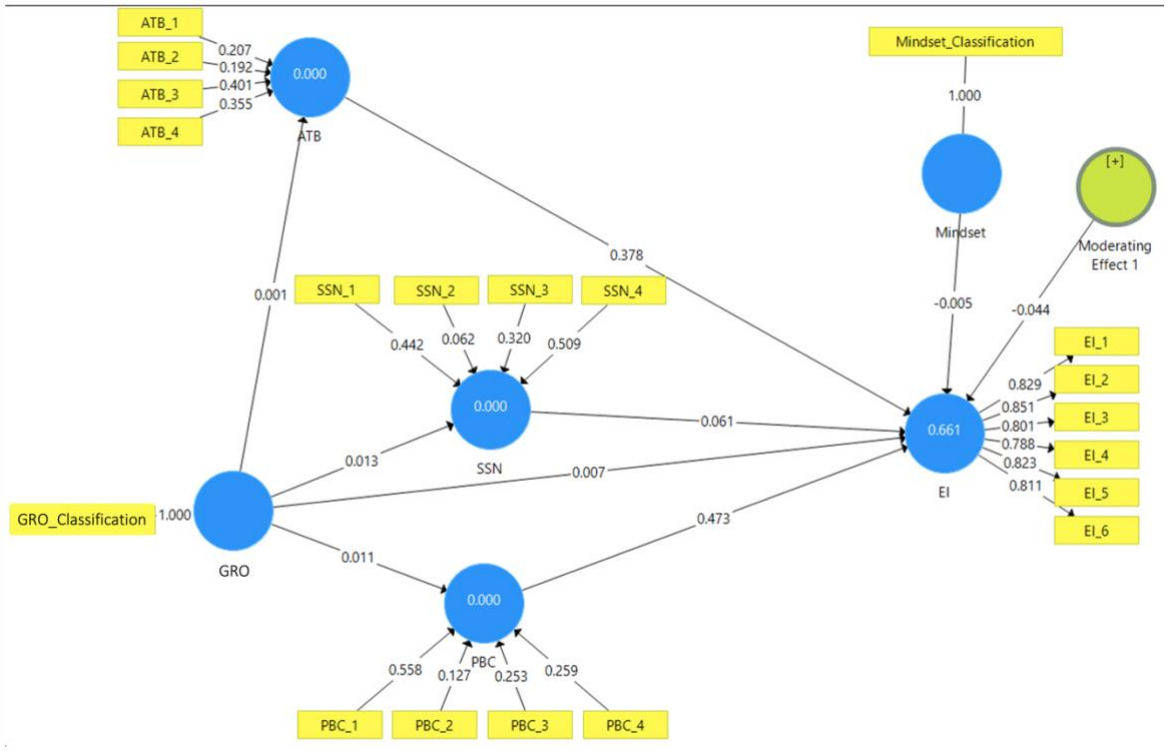


Figure 9: SEM model

The path coefficients for the hypothesised relationships are presented in Tables 13 and 14.

Table 13: Total effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
ATB -> EI	0.378	0.375	0.055	6.898	**0.000**
Mindset -> EI	-0.005	-0.008	0.038	0.139	**0.889**
Moderating Effect 1 -> EI *GRO→EI (Moderated by Mindset)*	-0.044	-0.040	0.059	0.738	**0.461**
PBC -> EI	0.473	0.472	0.053	8.953	**0.000**
SSN -> EI	0.061	0.068	0.046	1.315	**0.189**
GRO -> ATB	0.001	0.002	0.054	0.014	**0.989**
GRO -> EI	0.007	0.006	0.033	0.201	**0.841**
GRO -> PBC	0.011	0.013	0.050	0.210	**0.833**
GRO -> SSN	0.013	0.015	0.054	0.241	**0.810**

Table 14: Special mediation effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
GRO -> SSN -> EI	0.001	0.001	0.004	0.179	**0.858**
GRO -> PBC -> EI	0.005	0.006	0.024	0.209	**0.834**
GRO -> ATB -> EI	0.000	0.000	0.020	0.014	**0.989**

4.4.1 Results pertaining to hypothesis 1

Results pertaining to H1a: GRO is positively related to EI among university students in South Africa.

H0: There is relationship between GRO and EI among university students in South Africa.

H1a: GRO is positively related to EI among university students in South Africa.

The research hypothesised that GRO has a positive influence on EI. The results in Table 13 show that gender role orientation (β = 0.006, p-value = 0.841) has a positive but not significant effect on EI of university students in South Africa. The effect was positive because the mean (average) bootstrapping effect was greater than zero (0.006). However, the effect was not significant because the p-value was greater than 0.05. Thus, this means that there is insufficient evidence at 5% significance level that GRO is positively associated with EI of university students in South Africa.

4.4.2 Results pertaining to hypothesis 2

There is a significant association between gender role orientation (GRO) and entrepreneurial intentions (EI) through the mediating role of attitudes towards behaviour (ATB)

H0: ATB does not mediate the relationship between GRO and EI.

H1b: There is a significant association between GRO and EI through the mediating role of ATB

This hypothesis states that the relationship between GRO and entrepreneurial intentions is mediated by attitudes towards behaviour. The results presented in Table 14 show that this hypothesis was not confirmed. The path GRO - > ATB - > EI (β = 0.000, p-value = 0.989) was not significant as the p-value was greater than 0.05. This means that there is insufficient evidence to suggest an association between GRO and EI through the mediating role of ATB.

4.4.3 Results pertaining to hypothesis 3

Subjective social norm (SSN) mediates the relationship between GRO and EI

H0: SSNB does not mediate the relationship between GRO and EI.

H1c: There is a significant association between GRO and EI through the mediating role of SSN.

This hypothesis states that the relationship between GRO and EI is mediated by subjective social norms. The results presented in Table 14 show that the path GRO - > SSN - > EI (β = 0.001, p-value = 0.858) was not significant because the p-value was greater than 0.05. This observation suggests that there is no significant relationship between GRO and EI through the mediating role of SSN.

4.4.4 Results pertaining to hypothesis 4

There is a significant link between GRO and EI through the mediating role of perceived behavioural control (PBC)

H0: PBC does not mediate the relationship between GRO and EI.

H1d: There is a significant association between GRO and EI through the mediating role of PBC

The results presented in Table 14 confirm that the GRO - > PBC - > EI pathway (β = 0.006, p-value = 0.834) had a positive effect, but not significantly, as the p-value

was greater than 0.05. This means that the supposition of a relationship between GRO and EI through the mediating role of PBC was not supported at a 5 percent significance level.

4.4.5 Results pertaining to hypothesis 5

Mindsets will moderate the relationship between GRO and EI

H0: Mindset does not moderate the relationship between GRO and EI.

H2: There is a significant association between GRO and EI through the moderating role of Mindset

The last hypothesis states that GRO has a significant impact on EI via the moderating role of mindsets. The results presented in Table 13 show a negative moderation (β = -0.040, p-value = 0.461), however, the influence was not significant as the p-value was greater than 0.05. This means that there is insufficient evidence that mindsets moderate the relationship between gender role orientation and entrepreneurial intentions at a 5% significance level.

4.5 Results pertaining to entrepreneurial preference (CE & SE)

There is a distinct preference for commercial entrepreneurship (CE); the results show that the general sample for this study has a significant preference for commercial entrepreneurship (M = 61.52) over SE (M = 38.29) at a 5% significance level (t-value is 16.76948, p-value is < .00001).

Does CE differ significantly by gender?

The analysis was performed on men and women because the sample sizes for the other gender classes were very small. The results show that the gender groups do not differ significantly in their preference for commercial entrepreneurship. The results presented in Table 15 show that the mean score for commercial entrepreneurship for males was 61.93 ± 19.614, compared to 60.94 ± 20.271 for female respondents. The means were not statistically different (t-value = 0.481, p-value = 0.631) as the p-value was greater than 0.05.

Does SE differ significantly by gender?

Gender groups also did not differ significantly in their preference for social entrepreneurship. The results presented in Table 15 show that the mean score for social entrepreneurship for males was 37.70 ±19.669, compared to 38.93 ± 20.104. The means were not statistically different (t-value = -0.601, p-value = 0.548), as the p-value was greater than 0.05.

Table 15: T-test SE and CE by gender

Gender		N	Mean	Std. deviation	t	P-value
SE	Male	161	37.70	19.669	-.601	.548
	Female	234	38.93	20.104		
CE	Male	161	61.93	19.614	.481	.631
	Female	234	60.94	20.271		

4.6 Summary of results

This chapter presented and explained the results of the analysis for this study. A positive influence was found between the key variables, apart from a negative moderation due to the influence of mindset. Nevertheless, for all these interactions, the results were not significant at the 5 percent level of significance.

A summary of the sample demographic data was presented in the form of graphs, charts and tables. The results of the factor analysis were also presented. These show that all items loaded strongly within factor groups to which they belong, as all factor loadings were greater than 0.4.

The results of construct reliability and validity were presented. The results showed that internal reliability was present for all constructs, as the Cronbach's alpha values were all above 0.7. There was a minor difficulty with the convergent validity of the SSN construct, as the value of the average variance extracted (AVE) was slightly below the minimum acceptable value of at least 0.4. However, the construct could not be improved by further deletions of items. Therefore, the construct was accepted as is because the composite reliability was greater than 0.6. Divergent

validity was also observed and determined using the Fornell-Larcker criterion. For the constructs in this study, the elements of the Fornell-Larcker criterion were greater than the nondiagonal correlations apart from SSN.

Partial least-squares structural equation modelling (PLS-SEM) was used to predict and explain the hypothesised paths and relationships. All relationships were positive, as hypothesised, except for moderation through mindsets. However, the hypothesised paths were not supported because they were not statistically significant. Considering other enquiries positioned in the study, the independent t-test was calculated to evaluate the entrepreneurial preference of the respondents. The study found a significant preference for commercial entrepreneurship over social entrepreneurship among gender groups.

Table 16: Summary of hypotheses results

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
ATB -> EI	0.378	0.375	0.055	6.898	**0.000**
Mindset -> EI	-0.005	-0.008	0.038	0.139	**0.889**
Moderating effect 1 -> EI *GRO→EI (Moderated by mindset)*	-0.044	-0.040	0.059	0.738	**0.461**
PBC -> EI	0.473	0.472	0.053	8.953	**0.000**
SSN -> EI	0.061	0.068	0.046	1.315	**0.189**
GRO -> ATB	0.001	0.002	0.054	0.014	**0.989**
GRO -> EI	0.007	0.006	0.033	0.201	**0.841**
GRO -> PBC	0.011	0.013	0.050	0.210	**0.833**
GRO -> SSN	0.013	0.015	0.054	0.241	**0.810**

The summary of the hypothesised relationships is presented in Table 16.

The next chapter will focus on a detailed discussion of the major findings of this study. The researcher will provide context based on the reported data, offer explanations and interpretations through the systematic use of the literature. A picture will also be painted of how these data fill research gaps and contribute to theoretical and pragmatic advances. Based on this discussion, the study will draw

supported conclusions aimed at expanding and enriching the literature while influencing efforts to improve entrepreneurial programmes and initiatives.

CHAPTER 5: DISCUSSION

Entrepreneurial intentions are believed to contribute to economic productivity by stimulating entrepreneurial action. Given such prospects, it is imperative to understand the factors that promote entrepreneurial intentions. This thesis, therefore, examined whether gender role orientations and mindsets can promote entrepreneurial intentions. These variables were worthy of attention because they have the propensity to function in tandem with the theory of planned behaviour. To assess the applicability and influence of these variables in relation to TPB, mediation and moderation tests were performed to determine whether gender role orientations and mindsets can interact to promote entrepreneurial intentions in a sample of final year undergraduate students. The results were presented in Chapter 4. In this chapter, the researcher discusses and interprets the results presented in Chapter 4 pertaining to the focal variables and hypotheses of this study, also drawing on the relevant literature to decipher the findings. The discussion begins with a consideration of the demographic profile of the participants, followed by a discussion of the key hypotheses of this study. The section then ends with concluding remarks on the results of the study.

5.1 Demographic profile of participants

5.1.1 Gender

A subset of the population included in this study consisted of 415 undergraduate students in their final year of study. Of the total number of 415 students, 56% considered themselves female, 39% considered themselves male, 3% considered themselves non-binary, 1% considered themselves transgender women and another 1% considered themselves gender-fluid. Other gender groups were not adequately represented in this study, as such, the two dominant samples were observed, a focus on the other sample would not provide a true reflection of events given the disproportionate representation. Respondents were asked to provide an

indication of their desired entrepreneurial path, i.e., whether they aspired to create a business that primarily met social needs while generating profits (social), or whether they simply wanted to create a business focused on maximising profit and economic value (commercial). The main sample of the study, women (56%) and men (39%), showed a greater inclination towards commercial entrepreneurship, with a mean of 61.93% for men and 60.94% for women. This shows a comparable preference between these gender groups. This provides insight into the views of prospective female entrepreneurs and is an indication that it is not only prospective male entrepreneurs who have a stronger inclination towards commercial entrepreneurship (Meyer, 2022). This finding also challenges the preliminary discriminatory discourse on entrepreneurship that categorises all other gender groups as more inclined to social rather than commercial entrepreneurship (Meyer, 2022).

The findings on entrepreneurial preferences encourage a refocusing of research by debunking the axiom in current research on feminine entrepreneurs (Adamus, 2021). The research allows for a stronger discourse that entrepreneurial support for women should include commercial entrepreneurship as a strong preference for women and those with a feminine GRO.

5.1.2 Race

A substantial proportion of the sample was black (78%), followed by white (10%), coloured (7%) and indian (3%). A considerable proportion of the black sample showed a significant propensity toward entrepreneurship. This finding contradicts the notion that black South Africans are less entrepreneurially inclined, which is due to an increased demand for black professionals in the corporate environment (Herrington et al., 2017). However, this finding relates to students and not the entrepreneurial intentions of those who are already employed.

This is an interesting and encouraging finding, as blacks represent a previously marginalised group of individuals. The previous literature has spoken of lower entrepreneurial intentions among Black youth due to structural and environmental

factors (Farrington, Venter & Louw, 2012; Muchabaiwa & Msimango-Galawe, 2021). Therefore, the positive reference of individuals who are not only black but also have a feminine gender role represents an important milestone in the South African entrepreneurship literature.

Discussions of race in South Africa have an extensive background and history. Therefore, discussions of race cannot be understood in isolation from contextual factors in the country. South Africa has a history of discrimination against blacks and women. As it stands, issues of exclusion and underrepresentation based on gender and race persist, leading to an increased perception of imbalance in the environment for members of minority groups (Pilvinyte, 2013; Urban & Moloi, 2021). Thus, the appetite for entrepreneurship reported by black and feminine students suggests that we should not simply attribute low entrepreneurial activity to student cognitions. Even though research argues that entrepreneurial cognitions, such as behavioural attitudes, social norms, perceived behavioural control and mindsets, are theoretically better approaches to studying entrepreneurial intentions (Farrington et al., 2012), we should also focus on the underlying factors that prevent previously disenfranchised groups (black and black feminine gender role-oriented individuals) from becoming entrepreneurs. In the South African context described above, social and cultural contexts are central because of their relationship to GRO and race.

Other racial groups were not adequately represented in this study, so a comparison between the dominant samples for the study, black and white, would not provide a true reflection of events given the disproportionate representation. Nevertheless, even though the goal of this research was not to determine which students have a greater propensity for entrepreneurship based on their ethnicity, this study did reveal a healthy level of entrepreneurial intentions across all racial groups. The hypotheses section below, will discuss the extent to which constraints and not always preferences, are a driving force behind differences in entrepreneurial intentions, particularly among those who align with the feminine gender role orientation, given that this paper concluded a significant representation of such individuals in this study.

5.2 Research Question 1

To what extent is GRO positively related to the EI of university students in South Africa?

Different gender groups represent a reservoir of untapped entrepreneurial potential that is critical to creating economic activity and growth, therefore, unpacking the underlying influence of gender role orientation across gender groups is critical, particularly among the previously negated gender groups. There is still a GRO imbalance in the entrepreneurial market. Among many other consequences of this imbalance, the representation of those with a feminine GRO is lagging as most active business owners continue to be men (Muchabaiwa & Msimango-Galawe, 2021). The pipeline of entrepreneurship could grow significantly if the existence of entrepreneurial activities and inclinations of other GRO groups were highlighted. Both feminine and masculine gender role orientations that are believed to influence entrepreneurship (Gupta, Batra & Gupta, 2020). Therefore, it is critically argued in the literature that GRO has the tendency to significantly influence the EI (Datta, 2020; Fei & Liu, 2023). Masculinity and femininity influence occupations in different sociocultural contexts (Vercruysse & Birkner, 2021). In some societies, there is a general stereotype that entrepreneurs possess masculine characteristics (Vercruysse & Birkner, 2021), so gender role identity has the propensity to clarify and solidify predictions and conclusions about EI that go beyond a view limited to binary biological sex (Datta, 2020).

As seen in this study, the male sample did not necessarily correspond to extreme masculinity, in fact, the overall self-ascription of the participants in this study were positive with a feminine GRO. This is not only a surprising finding, but also one of the most important discoveries of this study. Such unconventional findings from the literature require attention and consideration, as they reflect a transition within the sociocultural context of South Africa (Chemaly, 2014).

Hypothesis 1

H0: There is no significant relationship between GRO and EI.

H1: GRO is positively related to EI among university students in South Africa.

Although no significant relationship was found between GRO and EI in this study, the results indicate a strong propensity towards entrepreneurship among university students in South Africa. There was agreement on all questions related to intention to start a business (entrepreneurial intention). 72% of the sample indicated that they would like to start a business one day (mean = 5.91). This is revealing and a contribution to knowledge considering that the participants in this study described themselves as holding a feminine GRO, which is primarily considered to have negative relationship with entrepreneurship.

This result provides an empirical finding that contradicts the claim that there is a negative relationship between a feminine GRO and EI. Based on stereotype threat theory (Gupta, Goktan & Gunay, 2014; Hoyt & Murphy, 2016), the literature suggests that individuals who have a feminine GRO evaluate entrepreneurship negatively because it does not match their characteristics; in other words, the theory states that a feminine GRO is not associated with the typical characteristics of an entrepreneur, therefore, this incongruence would lead to a perceived threat that causes these individuals to negatively evaluate their ability to take on an entrepreneurial role (Pérez-Quintana, Hormig, Martori & Madariaga, 2017). As we found in this study, this is not necessarily true.

As mentioned earlier, this threat is not evident in this study. Therefore, this result could be an artefact of the participants' study subject. A sizeable proportion (43%) of the participants in this study were in the field of commerce and management, where business and entrepreneurship are central aspects of the curriculum. Previous research has discovered a positive interaction between entrepreneurial education and intentions. Entrepreneurial education or training not only affects an individual's expertise and skills but can also influence his or her perceptions and beliefs about entrepreneurship, this is even more true for young people such as

university students (Lv, Chen, Sha, Huang & Huang, 2021). Research suggests that young people, especially university students, are fertile ground for developing cognition and absorptive skills that are critical for increasing entrepreneurial intentions (Swarupa & Goyal, 2020).

This study also provided results consistent with those of Gupta et al. (2020), whose findings empirically refuted the previous literature, suggesting that feminine characteristics do not correspond to entrepreneurial intentions. Gupta et al. (2020), and Perez-Quintana et al. (2017) report a positive and significant relationship between entrepreneurship and a feminine gender role orientation among women.

This research demonstrates that gender role expectations are being dismantled among the new generation of university students in Gauteng. Men's self-perceptions of identity have evolved, with self-identification moving in a more neutral (androgynous) and feminine direction, particularly in this study. Be that as it may, it is important to remember that the figurative representation of the entrepreneur is typically masculine (Dean, 2017) and there are fewer role models or references of feminine entrepreneurs (Perez-Quintana et al., 2017; Ndofirepi, Rambe & Dzansi, 2018) and this continues to influence students' self-assessment and evaluation of others against this image as they pursue entrepreneurship. However, the results of this study have the potential to subvert the stereotypical threat of becoming an entrepreneur, regardless of existing stereotypes for those who have a feminine gender role orientation.

This is also particularly revealing because recent research observations have shown that the earlier archetype of the masculine entrepreneur is shifting and evolving toward a more androgynous representation (Perez-Quintana et al., 2017; Data 2020) and it is likely that this trend is slowly taking hold in South Africa as well. Indeed, recent studies in the South African literature emphasise the importance of feminine characteristics for entrepreneurs and managers (Perez-Quintana et al., 2017; Data, 2020; Pérez i Quintana, Hormiga Pérez, 2015, Ramam, 2014). This is significant in that the conclusions of earlier research were informed by a binary and biological examination of gender rather than a social and cultural construction of

gender. The emergence of studies that examine and confirm the relationship between GRO and entrepreneurial inclinations and managerial traits is a breakthrough and ground-breaking milestone in the advancement of knowledge. And the results of this study contribute to the formation of this picture.

The results of this study show a positive and substantial propensity toward entrepreneurship, which is consistent with the findings of Vercruysse and Birkner (2021), who reject the hypothesis that a feminine GRO is negatively associated with entrepreneurial intentions compared to non-femininity. Therefore, this study challenges the social construction of the feminine gender role identifying individuals as the 'other' in entrepreneurship, as these individuals are not considered suitable for entrepreneurship.

Overall, the study contributes to contemporary research by adding a contextual lens. South Africa continues to be fertile ground for studies on gender role identities and entrepreneurship because the country's context is diverse and there are transitions in socio-cultural beliefs and economic productivity influenced by new research and the dismantling of rigid societal prescriptions (Shange, 2017), particularly in Gauteng province, which means that the previous literature is not immune to these transitions either, but also needs to be reviewed and updated. For example, the positive association between GRO and EI in the South African context adds immense value to the literature as it provides new evidence that points to a great attitude towards entrepreneurship, despite the burden of gender roles and the neglect of gender role orientation within gender equality policies and traditional research (Meyer, 2022). This result also suggests that theoretical conclusions drawn on sex cannot be generalised to all genders role orientations and, most importantly, sex cannot be considered a representative of people's gender role orientations (Perez-Quintana, et al., 2017; Datta, 2020). The effectiveness of entrepreneurial policy depends on these theoretical changes and insights.

5.3 Research Question 2

To what extent is GRO positively related to EI via the mediating role of attitude toward behaviour (ATB)?

The literature suggests that individuals with a feminine gender role orientation have lower attitudes toward entrepreneurial behaviour, implying that a feminine gender role orientation is considered negatively related to entrepreneurship via the influence of attitude toward behaviour (Engle, Schlaegel & Delanoe, 2011; Vracheva & Stoyneva, 2020). However, this literature relies on research scales that measure gender-stereotypical attributes of masculinity (assertive) and femininity (caring), as opposed to self-attributed perceptions of masculinity and femininity (Kachel, Steffens & Niedlich, 2016). This is a gap in knowledge, as current research reports an unstable factor structure in these scales (Kachel, et al., 2016). In addition, the current literature cautions against using attributes such as meek and competitive as direct indicators of femininity and masculinity, which is a limitation because such attributes depend on sociocultural context and time (Adamus et al., 2021). We live in a world where the space of socially constructed gender role attributes is changing significantly. It is likely that as these meanings change, the scales will lose their robustness in capturing the actual indicators of femininity and masculinity.

This risk is evident in the results of recent studies by Adamus et al. (2021), who use attributes of the BSRI to assess masculinity and femininity. The study had instrument deficiencies, for example, the items of the scale used loaded on unexpected factors, the study attributed the inconsistencies in measurement to the changes in social roles assumed by members of society, especially women (Kachel et al., 2016; Adamus et al., 2021). These studies are evidence that the traditionally ascribed masculine or feminine attributes are gradually evolving, and some are disappearing altogether, this observation and rationale is consistent with the findings and main arguments of this study.

In summary, this study asserts that gender-stereotypical attributes of femininity have been shown to be compatible with entrepreneurship. It is not a matter of masculine attributes being inherently compatible with entrepreneurship and feminine attributes not. It is a matter of context and whether femininity and masculinity are appropriate constructs for a particular context.

5.3.1 Results related to hypothesis 2

H0: ATB does not mediate the relationship between GRO and EI.

H2: There is a significant relationship between gender role orientation (GRO) and entrepreneurial intention (EI) through the mediating role of attitude toward behaviour (ATB).

The mean score for ATB in this study (5.39) was comparable to studies in which the sample self-identified as masculine, this observation contributes to new findings by suggesting that students with a feminine gender role orientation may also exhibit high attitudes toward entrepreneurial behaviour. This result contrasts with research findings suggesting that a feminine GRO negatively affects EI through the influence of ATB. The results of this study are supported by the research findings of Vercruysse and Birkner (2021), which also refute the claim that a feminine GRO has a negative indirect influence on EI through ATB. This finding implies that engaging in entrepreneurial activity is appealing to the sample population of individuals who identify with a feminine gender role. This finding is critical for reconstructing cognitions in diverse cultural contexts in South Africa and Africa in general.

Further research found that the attitudes of individuals with a feminine GRO are influenced by the cultural context in which they live (Borrero & Juan, 2017; Greenman, 2013). This may explain the low influence of ATB on the relationship between EI and GRO (Shinnar, Giacomin & Janssen, 2012). Studies that have examined individuals with a masculine gender role orientation in diverse cultures have reported no significant difference in their attitudes toward entrepreneurial behaviour but have found a significant difference in individuals with a feminine GRO (Karimi, Biemans, Lans, Chizari & Mulder, 2014; Datta, 2020). This confirms the influence of socio-cultural perspectives and contextual factors in the formation of entrepreneurial beliefs and inclinations of aspiring entrepreneurs with a feminine GRO. Socio-cultural view have traditionally been biased towards feminine gender groups, especially when it comes to choosing professions, political and leadership roles (Datta, 2020). The depth of this bias can be traced to historical occupational

stereotypes based on sex, physical strength, and intelligence (De Freitas, 2015). Although the world has made great strides in achieving social equality and organisational justice through policy, many of these changes are only on paper but not in practise. Regardless, certain parts of the country, such as Gauteng province, have made considerable progress in adopting inclusive and non-stereotyping beliefs. Gauteng is one of the provinces where progressive and inclusive gender stereotypes are present and highly valued. However, rigid, and unreformed gender stereotypes still prevail in some parts of the country, especially in relation to people who have a feminine GRO, regardless of their sex.

Most students in Gauteng province come from diverse cultural contexts in South Africa. For most, Gauteng is merely their place of study, but their cultural foundations and values emanate from their hometowns (Bernstein & Chemaly, 2017), such as KwaZulu Natal, Eastern Cape, Limpopo and Free State and these provinces have traditionally been known to be rigid in terms of their cultural beliefs (Makhowane, 2021), in the sense that some occupations are seen as suitable for men or women. The context of gender is still binary in nature (De Freitas, 2015; Makhowane, 2021). Therefore, it is plausible that the association with values and cultural stereotypes influences the occupations that students pursue despite the actual attractiveness of the occupation.

Although in this study the association between GRO and EI was positively influenced by attitude toward behaviour, this influence was not significant, suggesting that cultural stereotypes have a strong pull that could influence the perceived attractiveness and incentives associated with pursuing entrepreneurship. In the South African entrepreneurship literature, several factors (barriers to entry and access to resources) have been found to be more of a barrier for individuals who hold feminine gender role than for those with a masculine gender orientation (Chinomona & Maziriri, 2015; Mulaudzi & Schachtebeck, 2022). Due to these factors, which are mostly environmental and cultural in nature, students with a feminine gender role orientation perceive the path to entrepreneurship as less optimal, even if they find the concept of entrepreneurship appealing.

Research findings derived based on this hypothesis have high theoretical value because they offer insights into the cognitions and attitudes of individuals with a feminine gender role. Research that has focused on individuals with a masculine gender role orientation has had no difficulty finding a relationship between this sample and EI through ATB (Vercruysse & Birkner, 2021). However, despite a strong attitude toward entrepreneurship, a feminine gender role orientation may not have a significant relationship with EI through ATB due to gender role stress or pressures from sociocultural factors. As a contribution to theory, this research positions gender role stress or strain as a significant phenomenon to be considered in the entrepreneurship literature. That is, prior to the manifestation of an entrepreneurial mindset, people with a feminine gender role tended to suffer from societal demands to adopt sex appropriate behaviours, activities, and occupations in society. This leads to gender role stress or strain and consequently the creation of negative self-schemas because the way these individuals wish to portray themselves and the gender roles they hold do not match those of society (Scott, 2018; Granderson, Harper, Wade, Odero, Onyango Olwango & Fields, 2019). Although the concept of entrepreneurship may be attractive, the gender role burden experienced by individuals with a feminine gender role may explain why ATB does not lead to a full manifestation of entrepreneurial intentions. Therefore, this study contributes to a new theoretical approach in entrepreneurship research, which postulates that the low levels of entrepreneurial activity of individuals with a feminine GRO are not a fact or something that should be considered innate, but a fact of socialisation that is reinforced by the burden of gender role orientation (Booth, 2020; Granderson et al., 2019). Rather than advocating only entrepreneurial intervention methods, entrepreneurship research should also recommend how gender role strain or stress can be manipulated to promote a positive link between gender role orientation and self-schemas, which would facilitate congruence with entrepreneurial image despite sociocultural stereotypes.

5.4 Research Question 3

To what extent does subjective social norm (SSN) mediate the relationship between GRO and EI?

The emergence of individuals with a feminine GRO opens new possibilities in research and this movement is a breakthrough in research that should not be neglected. Indeed, research has found that individuals who have a feminine gender role identification have more success in the search phase of entrepreneurship, where the aspiring entrepreneur must build interpersonal relationships with others to gather market intelligence and discover opportunities (Ramam, 2014; Vercruysse & Birkner, 2021). Research shows that aspiring entrepreneurs may face unstable environmental conditions and uncertainty about their networks and partners, as such, these entrepreneurs will be challenged to be flexible and adaptable. During times of uncertainty, attributes related to being feminine, enables trust and clarity through communication and trust in connections and relationships are of foremost importance during this milestone (Mueller & Dato-on 2008; Ramam, 2014). Therefore, at this stage, even those with a masculine gender role orientation are forced to tap into their repertoire to channel their feminine traits to effectively manoeuvre through this entrepreneurial journey.

Like other studies, the results of this study show that subjective social norms are critical to entrepreneurial strength. SSN item one, that is, “my immediate family values the entrepreneurial career more than any other career,” received the lowest mean score of all the items representing the 3 antecedents of entrepreneurship. Consequently, if students are contemplating the decision to pursue an entrepreneurial career and the opinions of key caregivers, such as their family members, are negative, this could discourage such a prospect, this is because, according to Ferri, Ginesti, Spano and Zampella (2018) the expectation of family support also includes the expectation of financial and resource assistance from these individuals. This is especially true for those who have a feminine gender role orientation, since their primary source of capital is family and friends (Liñán et al., 2020). Therefore, because participants in this study had little confidence in the support and endorsement of significant others, particularly family, it is likely that this less than strong perception of support and endorsement of their decision to become entrepreneurs contributed to an insignificant mediating influence on the relationship between GRO and EI.

There is some representation of those who exhibit traits of a feminine GRO in the entrepreneurial spheres, such as fashion designers. Many of these entrepreneurs, despite their scale, do not enjoy the privilege of being considered "true entrepreneurs" by society and especially by their families (Stokes, 2013). There is a bias against entrepreneurial ventures that do not conform to traditional expectations of what is masculine (Stokes, 2013). This bias may have influenced the strength of our mediation effects.

Extending this idea, success in a cultural context is evaluated and shaped by symbolic capital, in other words, celebrity and prestige. In this sense, entrepreneurs who operate in industries considered more masculine are attributed more symbolic capital by the media and members of society (Apesoa-Varano, 2007). This issue is even more interesting because fashion driven, and aesthetically oriented business sectors are strongly influenced by sociocultural influences (Stokes, 2013). This perception leads to the continued devaluation of industries and entrepreneurs oriented toward those with a feminine gender role orientation, not only from an economic perspective, but also from a symbolic one. The devaluation usually occurs through trivialisation and belittling of the challenging work associated with the profession. In addition, the masculine parts of the profession are overemphasised while the feminine aspects are downplayed to signal professional prestige (Apesoa-Varano, 2007; Mears, 2011, oni-Sinha, 2011).

In a case study of entrepreneurship within the fashion industry, Stokes (2013) found that feminine fashion entrepreneurs recognised that their families did not recognise their challenging work and the professional skills they possessed to do their jobs. The media, family members and friends attributed less value to fashion entrepreneurs than other professions. Frequently, fashion entrepreneurs reported self-doubt as many of them stated they questioned the value of what they wanted to do with their lives (Mears, 2011; Stokes, 2013). It is therefore apparent how devaluation can lead to lowered self-esteem, which in turn could influence the entrepreneurial inclination of individuals with a feminine GRO.

As an extension of this idea, according to Venkatapathy and Pretheeba (2014) and Georgescu and Herman (2020), the construct of family background may be something that propels or hinders the intention to become entrepreneurial. For example, in the case study by Stokes (2013), participants who came from families that value other occupational options, such as, academic families, felt that although they would like to be entrepreneurs, it would be illogical to go in that direction if all other members of the family were academics. Similar research shows that the feeling and thought of not pursuing entrepreneurship is exacerbated by the fact that those in the creative industries rely heavily on private funding from friends and family, which presents a feasibility problem.

5.4.1 Results related to hypothesis 3

H0: The interaction between GRO and EI is not mediated by SSN.

H3: There is a significant relationship between GRO and EI through the mediating role of SSN.

This study shows a positive but not significant indirect influence of femininity on entrepreneurial intentions via subjective norms. This finding can be attributed to the sociocultural context in which femininity is perceived in the context of entrepreneurship, as well as evidence suggesting that individuals with a feminine gender identity are highly receptive to the opinions of others (Overbeke, Bilimoria & Somers, 2015). For example, a considerable number of feminine students in this study also felt that their family members did not recognise entrepreneurial productivity as a realistic, and a valuable career choice.

Against this background, Overbeke (2015) postulates that people with a female GRO are sensitive to the needs of others, as such, it is reasonable to assume that entrepreneurial aspirations of people with a feminine GRO may be blocked by the opinions, needs and judgments of others. It is even plausible to suggest that a dearth of role models and success stories from entrepreneurs with the same gender role is also a barrier (Karimi, Biemans, Lans, Chizari & Mulder, 2014). As in reality, the availability or a lack of available archetypes that resembles a mould, and picture

of a certain entrepreneur may influence the subjective norms of students who are still on a journey of building a mental construction of their world through their experiences with significant others at home and in educational spaces (Karimi et al., 2014).

Other research has found that exposure to an entrepreneurial background (family) also contributes to inclination towards entrepreneurship, particularly among individuals with a feminine gender role (Venkatapathy & Pretheeba, 2014; Georgescu & Herman, 2020). The fact that participants in this study reported that they had little trust in their families to support their entrepreneurial aspirations suggests that they may not have come from an entrepreneurial home. Therefore, it is likely that the lack of entrepreneurial experiences influenced the strength of the impact of subjective social norms on the primary relationship between GRO and entrepreneurial inclination.

Although exposure to entrepreneurship through family members can function as a driving mechanism for entrepreneurial endeavours, it is also true that the overt or covert lack of support from family members, especially the father, can act as a barrier to entrepreneurial endeavours. Research focusing on family businesses identifies the father as the ultimate decision maker responsible for selecting a successor for the family business. The literature reports a lack of successors with a feminine gender role in family businesses (Poza, 2013). Research has raised interesting questions about the lack of successors in the form of daughters (Bilimoria & Lord, 2014). Given the lack of diversity in family business hierarchies, research by Bilimoria and Lord (2014) and Overbeke et al. (2015), shows that even when the daughter's self-efficacy perception is high and has a positive impact on her succession vision and intention in a family business, the cognitive constructs may meet with the disapproval of the father. This study has revealed a bias in the cognitive frames of fathers in relation to their daughters. Feminine or expressive traits are what stands before daughters and an opportunity to be promoted as successors in the family business. Daughters who possess these traits are unfortunately overlooked in the succession process. Consequently, when daughters recognise the inherent bias in their father's assessment of their

contribution, value, abilities, and prospects, in response to this feedback, they stop making plans and goals for their advancement in the family business.

The truth is that the decision about choosing a successor does not happen overnight. In fact, there are several ways in which fathers signal their intentions and disapproval, many of which are subtle but can be perceived by those affected, namely the daughter (Overbeke et al., 2015; Kubíček & Machek, 2019; McAdam, Clinton & Dibrell, 2020; McAdam, Brophy & Harrison, 2021). When fathers do not agree that their daughters have successor efficacy, they may engage in seemingly supportive behaviour that has harmful consequences (Kubíček & Machek, 2019, McAdam et al., 2020). According to Overbeke et al. (2015), fathers practise condescending chivalry, radiant devaluation, collegial exclusion, and considerate dominance. These practises serve to convey mixed messages and intentions that aim to create a seemingly supportive space but are simultaneously harmful. Lozano et al., (2011) and Overbeke et al. (2013), also made the same discovery. In their examine of the dynamics and factors influencing a female child in the operation of family-based business, the authors found that those with a feminine GRO are typically invisible to fathers as potential leaders of the family business. Gender role biases were found to contribute to the father's perception and treatment of the prospective successor.

Recent studies suggest that the sociocultural environment is gradually transforming into a more egalitarian space, however, there is still evidence of traditional ideologies related to the gender division of labour and gender disparity remains a fundamental problem in South Africa (Obioma, Jaga, Raina, Asekun & Bark, 2022). Therefore, it is logical to argue that students with a feminine gender role orientation may have been influenced by how their gender role orientation is evaluated based on socialisation factors, cultural conditions, and cognitive beliefs about appropriate gender occupations. Furthermore, in this study, it is likely that students knowing of others who have been affected by such stereotypes through direct life experience or consumption of research influenced our findings.

Finally, SSN has been shown to have a considerable influence on the connection between femininity and entrepreneurship among entrepreneurs than among non-entrepreneurs, particularly early in an entrepreneurial career (Barrera-Verdugo, 2021; Utami, 2017). This research focused on final year undergraduate students who are not entrepreneurs. It is likely that mediation would have been stronger in a sample of experienced and practicing entrepreneurs.

5.5 Research Question 4

To what extent does perceived behavioural control (PBC) mediate the relationship between GRO and EI?

The sample for this study exhibited feminine GRO and high perceived behavioural control. This combination of results is at odds with previous studies (Veciana et al., 2005; Díaz-García & Jiménez-Moreno, 2010; Shinnar et al., 2018; Vracheva & Stoyneva, 2020) that have found little positive to negative association between a feminine GRO and EI. Nevertheless, the mediation of PCB on the relationship between GRO and EI was not significant, suggesting that other variables may have a greater explanation for this relationship. Research by Overbake et al. (2015), indicates that individuals with a feminine GRO, despite their belief that they can manage and lead a successful business, are unlikely to develop the vision to lead a business when they perceive a discriminatory environment.

The above is consistent with the recent observation of Otchengco and Akiate (2021), according to these scholars, the perception of high behavioural control in others is not sufficient to manifest in the intention to start a business. Rather, the perception that one is supported and has a supportive environment influences the interaction between PBC and entrepreneurial propensity. That is, the stronger the belief that one has a good mix of basic support, i.e., support and endorsement from key attachment figures, and a supportive environment, the stronger the PBC and, consequently, the stronger the propensity to engage in entrepreneurial activities. This is particularly telling given that individuals with a feminine gender role identity still face severe structural support issues (Mulaudzi and Schachtebeck, 2022) despite the great need for diverse and increased entrepreneurial activity in South

Africa (Farrington et al., 2012; Muchabaiwa & Msimango-Galawe, 2021. These individuals face barriers to accessing economic (funding), political and social (support and networks) tools governed by nongovernmental organisations, the private sector, and the public sector (Mulaudzi & Schachtebeck, 2022). Access to these tools is difficult or impossible for those who occupy gender roles that are incompatible with masculinity.

On paper, things have never looked better for entrepreneurs in South Africa in terms of opportunities, provision of entrepreneurship education funding and support structures (DTI, 2007, Muchabaiwa & Msimango-Galawe, 2021). However, as noted in the paragraph above, this is only part of the story, as the tools and resources are not as readily available to feminine gender-role oriented groups. First, entrepreneurship in South Africa is still assigned to biological sex, in other words, men and women, so entrepreneurs have been virtually grouped together without considering gender role differences, for example, some women do not conform to the feminine gender role orientation and some men do not conform to the masculine gender role orientation. Yet, there are a variety of intervention methods that target only the construct of sex, while disregarding those who defy societal expectations.

This is a challenge for entrepreneurship research because the concept of entrepreneurship cannot be separated from the sociocultural context and gender roles. Research has proven that intervention methods granted through a blanket approach may not bring the desired structural support that is intended (Farrington et al., 2012). This indicates that research for an enabling and supportive structural environment plays a critical role in policy design, implementation, and outcomes. This is because, despite perceived behavioural control, there may be variables outside of their control that hinder the successful implementation of their entrepreneurial inclination.

5.5.1 Results related to hypothesis 4

H0: PBC does not mediate the relationship between GRO and EI.

H4: There is a significant relationship between GRO and EI through the mediating role of PBC.

Although no significant mediating effect of perceived behavioural control (PBC) on the relationship between GRO and EI was found in this study, a modest positive influence was observed. This could be because in this study, students' perceived willingness (mean: 5.47) and ability to establish, operate, and sustain a lucrative enterprise (mean: 5.45) was high. The sample for this study also demonstrated a high level of self-assurance, and belief in their knowledge and competence to operate and maintain a viable enterprise. This positive belief can be ascribed to the fact that a sizeable number of the participants were in the commercial field. As expected, the positive effect is congruent with the literature. According to (Datta, 2020), this reflects the congruence between feminine gender role-oriented individuals and entrepreneurial activity, so this result may promote a change in literature and mindset and in turn motivate the entrepreneurial intentions of students with a feminine GRO.

Perceived behavioural control is an inward-looking construct that relates to an individual's self-efficacy (Arafat, Saleem, Dwivedi & Khan, 2020). However, research has shown that external factors significantly influence intentions (Alkhatib, Al-Aiad, Mustafa & Alzubi, 2021). Despite a healthy level of self-efficacy, a perceived sense of incongruence between gender roles and entrepreneurship archetypes can influence intentions to behave entrepreneurially, as research suggests that such perceptions can be so profound that they influence implicit stereotypes of GRO (Datta, 2020).

Those with a feminine GRO might even self-identify as masculine to reconcile society's image of an entrepreneur with their own identity (Overbeke, 2015). This was observed in German students who claimed that it was inappropriate to judge one’s prospects to be entrepreneurial simply based on their sex, yet when evaluated, these same students showed an implicit bias toward a feminine-oriented entrepreneur. This research showed that persistent entrepreneurial stereotypes influence how others identify themselves and others as entrepreneurial or non-

entrepreneurial simply based on their gender or gender role orientation (Borrero, 2017; Thébaud, 2010).

The observed positive influence of GRO on the intention to be entrepreneurial through perceived behavioural control in this study raises curiosity beyond simply rejecting femininity as a correlate to entrepreneurship. This finding propels us to draw on context, time, and culture a lot more, this finding is supported by research that has examined entrepreneurship in different countries and cultures (Borrero, 2017). The study by Shinnar, Giacomin, and Janssen (2012) found a significant correlation between individuals identifying as feminine and entrepreneurial intentions, which was consistent with findings by Datta (2020); Gupta (2020); Vercruysse and Birkner (2021) who observed a positive relationship among female students' and entrepreneurial intentions, which was attributed to political, economic, and social factors. This is noteworthy considering that South Africa's social, labour, and economic conditions and policies are constantly changing to allow for inclusion and diversity (DTI, 2007). This study found a positive connection between a feminine GRO and propensity to engage in entrepreneurial behaviour through PBC which was not conspicuous in previous literature. Therefore, it is plausible that future research in South Africa will find more significant results because of this change.

Although South Africa is focused on enabling diversity and inclusion, there are still negative stereotypes about certain genders and entrepreneurship, with those with a feminine GRO being viewed negatively toward entrepreneurship in the most traditional parts of the country (Vercruysse & Birkne, 2021). Overbeke et al., (2015) found that such negative stereotypes undermine the entrepreneurial intentions of those with a feminine GRO, even when these individuals have proactive personalities and characteristics that demonstrate high perceived behavioural control. This may have influenced or shaped the outcomes obtained in this study. As an extension of this finding, Gupta, Turban and Bhawe (2008) found that when the concept of entrepreneurship as a career was presented in a gender-neutral manner, individuals with feminine and masculine gender role orientation showed an equally strong entrepreneurial inclination. However, when entrepreneurship was

presented as a masculine career option it stimulated role incongruence with those who hold a feminine gender identity. Even though these individuals believe in their own abilities to run and sustain a business they might be influenced by the context and social norms to align their behaviour with the social prescriptions upheld by significant others, political and educational institutions (Vercruysse & Birkne, 2021).

5.6 Research Question 5

To what extent do mindsets moderate the relationship between GRO and EI?

This study discovered a nonsignificant moderation effect on the interaction between GRO and EI by mindset. This result was surprising considering that the participants in this study had a developmental mindset (growth mindset). Logically, it is plausible that an incremental mindset could regulate the strength of the relationship between GRO and EI. This is especially so since literature argues that people with a developmental mindset (growth mindset) are more likely to be creative and take risks (Ngek, 2012; Levy, 2016). Regardless, the main participants in the study were students, while the earlier researchers who noted mindset as a key factor in entrepreneurial inclination, worked with actual business owners (Ngek, 2012; Alshebami, 2022). A study conducted among SME owners in South Africa found that a lack of incremental (growth-oriented) mindset was associated with a high failure rate among SMEs (Ngek, 2012; Stoycheva & Ruskov, 2015).

This study also found that a growth mindset is an even more critical component of the desire to develop and acquire business expertise, meaning that our results would be even more meaningful if our sample included actual entrepreneurs. In addition, entrepreneurial education has been shown to be important for those who have a growth mindset (De Carolis, & Litzky, 2019; Burnette et al., 2020), as those who had not received entrepreneurial education showed low risk-taking, creativity and motivation. The bias in entrepreneurship education toward those with a feminine gender role identity may have influenced our results, as entrepreneurship education does not comprehensively incorporate inclusive perspectives and content into its curriculum (Meyer, 2022).

Building an inclusive entrepreneurial environment is critical to the learning needs and life experiences of all entrepreneurs, regardless of biological sex, gender, or classification of characteristics such as race, religion, age, or disability. Currently, feminine entrepreneurs are viewed as the ‘other’ in entrepreneurship, leading to a sense of disconnectedness and incongruence about entrepreneurship (Ahl 2006; Gupta, 2020; Meyer, 2022).

5.6.1 Results related to hypothesis 5

H0: Mindset does not moderate the relationship between GRO and EI.

H5: Mindset will moderate the relationship between GRO and EI

This study found that a growth mindset did not significantly moderate the relationship between GRO and EI. This finding was unexpected and contradicts previous research that found higher levels of learning, self-direction, and initiative among participants with a growth mindset. In addition, proponents of a developmental mindset associate failure with inadequacies in a plan of action intendent to accomplish a task instead of their individual limitations and shortcomings. These characteristics have been associated in research with a greater propensity to innovate and be entrepreneurial (Gucciardi, Jackson, Hodge, Anthony & Brooke, 2015; Levy, 2016).

Given the above, it is important to remember that mindsets are influenced by the context in which they develop and do not arise in a vacuum. Consequently, a student may have an incremental mindset, but his entrepreneurial intentions and activities may not manifest if he is in an unfavourable home, school, or social environment that undermines his growth, and development.

Gucciardi et al. (2015), and Levy (2016) suggest that individuals with a growth mindset thrive in an environment where they feel they can innovate and contribute innovative ideas. The key underlying observation here is the perception of an enabling environment. In the previous sections of this study, the South African environment was presented as a potential barrier for aspiring entrepreneurs. A

considerable number of students in this study did not believe that their families would consider entrepreneurship as a viable career option, which may have influenced our findings. In addition, the current dearth of role models does not support the ideal of an enabling environment (Boris & Moloi, 2021); this is especially true for those with a feminine GRO as stereotypes suggest that the pursuit of an entrepreneurial journey is not an appropriate or viable professional choice for them.

In addition to the above, while a growth mindset is considered critical to entrepreneurial inclination, consideration of context and environment is equally critical. Generally, IPT is studied in the workplace or educational setting in relation to learning. Unlike workers and practicing entrepreneurs, students' cognitions are susceptible to several extraneous variables that may function as stronger moderators of entrepreneurship promotion and these moderators may be associated with environmental factors (Burnette, 2020; Su et al., 2021).

In reality, depending on environmental factors, people with high entrepreneurial intentions do not always behave entrepreneurially if they perceive the environment as obstructive and unfair (Burnette, 2020). Therefore, people with a growth mindset may also avoid situations where the environment is not fair (Jia, Lim, Ismail & Tan, 2021). This is because a growth-oriented mindset embraces the idea of self-growth, development, and achievement. If an environment does not provide a real opportunity to learn and grow, they may see this as foul play and thus be cheated out of achievement (Bostwick & Becker-Blease, 2018). According to Levy (2016) and others, people with an incremental mindset believe that their skills and efforts can be improved. Therefore, they ascribe their successes or lack of success to their efforts because they believe in continuous self-improvement (Bostwick & Becker-Blease, 2018; Cheng et al., 2021; Parada & Verlhiac, 2022).

The perception of a fair environment is very profound and has been linked to influencing mindsets. For example, research among undergraduates has shown that despite students having a growth mindset, perceptions of procedural fairness in the form of feedback from the environment moderates' intentions to continue research collaboration, in other words, those who have a growth mindset place a

high value on procedural fairness when it comes to their trust in the individuals with whom they will collaborate in research (Katz & O'Malley, 2016). Consequently, students who perceive a positive and fair environment are more likely to continue research collaboration than those who perceive a negative environment (Katz & O'Malley, 2016).

Not surprisingly, members of minority groups have different perceptions of procedural fairness than their peers (Boris & Moloi, 2021). Women, transgender people, and people of fluid gender are among those who are strongly oriented toward the feminine gender role. How some of their role models are treated by society and the environment in which they compete can influence not only their mindset, but also their entrepreneurial intentions. Thus, procedural justice is another construct that can be used to understand entrepreneurial relationships, particularly regarding the role of environment and culture in creating an equitable entrepreneurial environment for all.

Today, the environment continues to be unfair to people with a feminine GRO (Nowosenetz, 2008; Yarnell, 2019; Datta, 2020; Booth, 2020; Mensah, 2023; Karim, Kwong, Shrivastava & Tamvada, 2023). Regardless of their growth mindset, they may not respond to challenges in the same way as people with a masculine gender role. This is because in the face of challenges and failures, they are encouraged by others to give up and find a more appropriate role as prescribed by the societies and cultures in which they live (Overbeke, 2015), rather than to continue. Indeed, it can be argued that given the expectation that people with a feminine gender role orientation will fail at entrepreneurship, engaging in entrepreneurial activity is seen as a test of their competence. Despite their intentions, these individuals may not actively engage in entrepreneurial activities to avoid demonstrating their competence, which would be evaluated through a biased lens (Overbeke, 2015). This, in turn, may affect their resilience, self-efficacy, optimism and hope. Some research suggests that a growth mindset alone is not sufficient, as someone who does not have resilience, self-efficacy, optimism, and hope, even if they have a growth mindset, may not demonstrate a firm intention to seize opportunities (Margaça, Hernández-Sánchez, Sánchez-García & Cardella, 2021; Levy, 2016).

For the participants in this study, it is possible that factors such as their hope and resilience influenced our results.

As mentioned earlier, participants in this study reported that they had low confidence in their caregivers' support of their decision to pursue entrepreneurship. Therefore, this low confidence may have influenced our results. Consequently, future investigation of these attributes (resilience, hope and self-efficacy) could help clarify our findings. This thesis states that a combination of these factors contributes to how a person with a growth-oriented mindset evaluates and responds to perceived pressures and conditions within the environment in which they live (Riolli, Savicki & Richards, 2012; Levy, 2016; Luo, Tsai, Su, Kim, Gao & Chen, 2022). A growth mindset alone is not sufficient. Rather, personal resources such as resilience, hope, and self-efficacy can influence their reactions, intentions, and behaviours (Levy, 2016). This research suggests that the concept of mindset, particularly for those with a feminine GRO, can be expanded to include the characteristics of psychological capital that may enable individuals to build their personal resources.

Similar to psychological capital as a personal resource, the strength and inclination to be entrepreneurial develops over time, which means that entrepreneurial intention is not a fixed state. Those who exhibit this intention may have developed it over time (Cha & Bae, 2010; Neneh, 2019). Some may have even developed curiosity and begun to gather knowledge and support to better understand it. For example, some students have taken classes to increase their knowledge of entrepreneurship, others have built relationships with mentors, still others have created business plans and visual representations (dream boards) of this career (Li, Li & Chen, 2022). Their efforts and actions may have consistently received positive or negative feedback from key caregivers along the way. Given the evidence of low confidence in family support, this is an important consideration. Research by Rutledge, Crouch, Valentiner, Davila, Milner and Skowronski (2018) suggests that parents who believe their children are engaging in behaviours that are not prescriptive respond with a negative, vindictive, and hostile parenting style. It is likely, therefore, that these students have been influenced by such parenting

tactics throughout their development (Meroka, 2023). These experiences could be an even stronger factor in encouraging or hindering the entrepreneurial inclinations of individuals with a feminine GRO (Engle, Schlaegel & Delanoe, 2011; Karim et al., 2023).

A last point to note about the current research is that cognitions such as the incremental mindset do not influence entrepreneurial propensity in a vacuum. Factors such as the lack of media representation of low-growth entrepreneurs and the strong influence of the Western perspective on entrepreneurship influence the exchange between mindsets and entrepreneurial intentions (Nowosenetz, 2008; Shange, 2017; Bruton et al., 2021). In South Africa, while trans people are represented in the hairdressing and salon industry, women in the street vending industry and people with fluid gender roles in the arts and crafts industry, they do not receive as much media attention as those in high-growth segments of the economy (Meyer, 2022).

The construction of business in South Africa is more similar to countries like India than the United States (US), where the number of people with a feminine GRO in informal business segments is skyrocketing (Gupta, Batra & Gupta, 2022). In India, this is valued, and the culture is more accepting of feminine constructed notions of entrepreneurship (Gupta at el., 2020). In South Africa, on the other hand, this image is less valued, due stereotypical categorisations which subscribes those with a feminine gender role orientation to caregiving careers (Sullivan & Meek, 2012; Adikaram & Razik, 2022; Iqani, 2023). In narratives of Indian entrepreneurship, stereotypical feminine traits related to caring for and benefiting the welfare of others, as well as general thoughtfulness and a sense of duty to others, are highly valued. In South Africa, on the other hand, traditional entrepreneurship narratives still emphasise the masculine side (Shange, 2017), as in the biographies of business founders from the US, such as Steve Jobs and Jeff Bezos, who are recognised and idolised by many South Africans. This may have influenced the primary relationship between GRO and EI despite the effect of mindset.

To further this argument, it is plausible that a lack of South African stories similar to the popular stories of India celebrating successful entrepreneurs such as J.R.D. Tata (Ntanjana & Mangwane, 2019), who was perceived as a provider and caretaker of society at large and the country, influenced the significance of the noted link between GRO and EI. Furthermore, unlike the US economy, which is more focused on large businesses run by most entrepreneurs associated with masculinity, the South African market is made up of small and medium-sized businesses and for the vast majority of South African students, the first port of call for daily needs is a small, informal and semi-formal business run predominantly by individuals with a feminine gender role. This context and the positive findings of this study show that the assumption that a feminine gender role orientation is not associated with entrepreneurship is not always true in other countries (Shahriar, 2018).

In fact, research has found congruent results in countries such as India where there was a positive and significant relationship between a feminine GRO and entrepreneurship (Gupta at el., 2020). The result also shows that in India, the mental image of an entrepreneur was associated with both a masculine and feminine GRO and that the likelihood of running a low-growth or high-growth business was irrelevant for this sample, challenging the assumption that high-growth businesses are advantageous for people who hold a masculine versus feminine GRO (Yacus, Esposito & Yang, 2019).

The positive association between GRO, mindsets and EI represents a unique contribution to the theory. To the researcher's knowledge, South African research publications that examine implicit person theories along with GRO and EI are rare and appear to be virtually non-existent. In addition, this research provides a potential avenue to also explore intervention methods for the mindsets of aspiring entrepreneurs with gender role stresses. Although there is evidence that implicit person theories are enduring cognitions, research suggests that they are also malleable and can be changed over time through a range of objective and directed experimental activities (Huang, Wei, Lu & Shi, 2022; Burnette, Billingsley, Banks, Knouse, Hoyt, Pollack & Simon, 2022). This means that even if a prospective

entrepreneur has a fixed mindset, a substantial number of studies suggest that this mindset can be changed (Huang et al., 2022; Burnette et al., 2022; Parada & Verlhiac, 2022). Heslin, Latham, and VandeWalle (2008) conducted an experiment with managers who held fixed cognitive beliefs. The researchers observed the participants repeatedly and collected data over an extended period. After the experiment, the researchers reported success: two months after the experiment, the participants who had fixed mindsets had adopted a chronic growth mindset. Therefore, this research raises the question of whether individuals with a feminine gender role can also be exposed to intervention methods designed to promote a positive self-schema despite having a feminine gender role orientation. This is perhaps even more critical than most entrepreneurship interventions, because although mindset interventions have been conducted and developed within the discipline of organisational psychology less research has been conducted on how implicit person theories of aspiring entrepreneurs can be changed through targeted interventions, let alone how self-schemas of individuals with a feminine gender role can be influenced to evaluate their gender roles more positively despite sociocultural stereotypes.

In parallel with the above theoretical contributions, this paper advances the discipline of entrepreneurship by presenting an IPT (mindset) instrument that has been validated in an African context. Thus, this study could serve as a foundation for future in-depth research and findings from subsequent studies could be effectively used to promote advances in the literature and in entrepreneurial programs and efforts.

5.7 Entrepreneurial preference; Social and commercial entrepreneurship:

An increasing number of scholars have examined the concept of entrepreneurship as a commercial concept or social construct. Commercial entrepreneurs are thought to start businesses that are primarily focused on profit, while social

entrepreneurs operate businesses whose primary motivation, in addition to making a profit, is social well-being (Datta, 2020). The current literature also suggests that commercial entrepreneurship is associated with a masculine GRO, especially the male group, while social entrepreneurship is associated with a feminine GRO, especially the female group (Chipeta, Kruse & Surujlal, 2020; Hechavarria et al., 2012; Hechavarria & Ingram, 2016).

The observations, and findings of this study contradict the suggestions of former research that claim that commercial entrepreneurship is suitable for masculine gender groups (Adamus, 2021). It was found that individuals with a feminine GRO have a much higher preference for commercial entrepreneurship than individuals with a masculine GRO. This is consistent with research from India, which shares some similarities with South Africa in terms of culture and economic character (Gupta et al., 2020).

In Indian research, neither masculine nor feminine gender roles are considered more relevant to the pursuit of commercial entrepreneurship (Gupta et al., 2020). As such, this finding suggests that social entrepreneurship is not necessarily a feminine prerogative. These findings once again highlight the differences in stereotypical perceptions of gender roles in relation to entrepreneurship across communities, cultures, places, and times (Shange, 2017).

Not surprisingly, commercial entrepreneurship is viewed as a masculine typed role in the US literature. Interestingly, however, the same study reports that social entrepreneurship in the US is seen as equally appropriate for men and women, suggesting a more androgynous composition (Gupta et al., 2019).

The above discussion reinforces the argument of this study that while there are cultural biases in terms associated with and an image of an entrepreneur, there are also transitions in the world driven by feminist research and gender studies that are breaking down rigidity in terms of gender roles and attributes of entrepreneurship (Smith, 2022).

Overall, these findings cast doubt and challenge the traditional narrative that entrepreneurship and commercial enterprise are inherently suited to masculine individuals (Vercruysse & Birkner, 2021). This affects the way members of both gender role groups (masculine and feminine) construct their image of entrepreneurship, which is critical to their psychological capital and EI.

This finding also highlights the possibility that preferences for the type of entrepreneurial path may vary, even between South African provinces, not to mention African countries and the world at large. To the researcher's knowledge, this research shows that there is a need to disentangle the imprinting of African and South African life experiences through the American or Eurocentric lenses, as outcomes are not as coherent external to the United States as they are within the context of the United States (Barkema et al., 2015).

This is especially true since concepts and ideas do not have the same meaning in all cultures and may even change over time. For example, studies that have looked at entrepreneurship and gender role orientation report diverse cultural experiences and environmental challenges in West and East Africa alone (Barkema et al., 2015), therefore, examining this research in the South African provinces could complement these findings and provide a solid avenue for future research.

This study forms a part of a few enquiries to have established a positive interaction between a feminine GRO and entrepreneurship and found an increased preference for commercial entrepreneurship among a feminine gender role-oriented group. This indicates the emergence of a new and robust line of research because although masculine and feminine gender role orientations are stereotypical, there are also overlapping nuances.

This research and the accompanying literature suggest that there is no such thing as the typical feminine entrepreneur or the typical masculine entrepreneur, but that the expressions of masculinity and femininity should be considered in specific environments, at specific times and in specific sociocultural contexts (Gupta et al., 2020, Barkema et al., 2015).

The differences between femininity and masculinity have already been researched (Vercruysse & Birkner, 2021). However, this study has highlighted reasons why and how individuals with a feminine GRO do not find the support that their counterpart enjoys through social subjective norms and how the environment and procedural fairness, as well as the lack of role models, can influence career congruence or incongruence (Shange, 2017; Datta, 2020, Scott, 2018).

The discussion above points to solid theoretical contributions of this work. For example, this is one of the few studies that has found a favourable relationship between a feminine GRO and entrepreneurship, as well as an increased propensity for commercial entrepreneurship in a feminine gender role-oriented population among a sizeable portion of a sample of black students. This ground-breaking discovery not only dispels persistent gender stereotypes that entrepreneurship is a male prerogative (Vercruysse & Birkner, 2021; Adamus et al., 2021), but also addresses the problem of classifying individuals with a feminine GRO as candidates for exclusively social entrepreneurial activities. This also draws our attention to the axioms that need to be refined in the entrepreneurial literature.

This study also contributes to the measurement of gender role orientation within entrepreneurial research in South Africa. Several measurement scales were used to capture key characteristics of gender stereotypes and traits. However, these scales did not measure facets of self-described masculinity and femininity but were heavily influenced by the binary assessment of gender (men and women) (Kachel, 2016). This thesis therefore argues that it is critical to measure gender in a reliable and valid manner using facets of self-described masculinity and femininity. The development and application of the gender role orientation scale in the South African setting is a useful methodological adjunct for capturing gender stereotypes in entrepreneurial research. Because it can be assessed on a global scale, the GRO scale used in this thesis can be used in different provinces and cultures. The application of the scale could improve future entrepreneurial research (Kachel, 2016). This study adds to previous knowledge by considering masculinity and gender as determinants of entrepreneurial propensity in general. Because previous research has reached biased conclusions about the relationship between sex and

entrepreneurial intention, this study provides clues as to why this might be the case and, as a result, recommends a new way to assess GRO (masculinity and femininity) and incorporate it in models of entrepreneurial research.

Overall, the research findings and conclusions discussed above make a theoretical contribution to South Africa. Conversations about gender role identity and equality need to move beyond sex (Chemaly, 2014), so this work allows for a contribution that challenges embedded representations of entrepreneurial discourse. When an entrepreneurial image is categorised as masculine it reinforces the nature of a masculinised discourse (Nowosenetz, 2008; Van Breen et al., 2017; Igani 2023), even though there are also entrepreneurs with feminine gender roles orientations in South Africa. The researcher challenges the dominant portrayal of entrepreneurship as a masculine or male prerogative in the literature. Rather than entrepreneurship being about intentions and merit, it is clouded by several contextual elements that affect: the image of entrepreneurship, the context of entrepreneurship, the portrayal and inclusion of entrepreneurs and the cognitions of aspiring entrepreneurs, particularly in South Africa (Shange, 2017, Scott, 2018). In this country, as in many other African countries, entrepreneurship is not a fair game for all, as entrepreneurship has historically been defined by and for masculine gender roles, while all others who do not fit this categorisation have been marginalised (Liñán et al., 2021; Mendick, Ottemo, Berge & Silfver, 2023). For this reason, and because of the persistent structural imbalance, femininity is associated with lack of competence, ability, and determination, while masculinity in entrepreneurship is associated with typicality, adequacy, ability, and competence.

This study illuminates current limitations and encourages a broader debate about how we research entrepreneurship when the assumptions underlying entrepreneurship research inherently underpin female and feminine subordination. Furthermore, it became clear in the findings of this work that final year students in the Gauteng province of South Africa do not necessarily engage in traditional stereotypical behaviours as previously assumed, but non-traditional, feminine and androgenic behaviours, which again argues for using gender role orientation as the theoretical basis and measure for the entrepreneurial sample, rather than just sex.

This work offers a challenging perspective in which femininity can be observed as a correlate to entrepreneurship, challenging the normative institutional foundations that limit opportunities for feminine entrepreneurs due to structural and sociocultural constraints.

CHAPTER 6: CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

This study is among the few that found a positive trend between GRO, entrepreneurship antecedents and EI; however, the observed relationships were not significant. This was also true for the relationship between GRO and EI by mindset. On the other hand, the representative sample of the study showed a significant preference for commercial entrepreneurship.

Taking a closer look at the study's sample, the respondents in this study indicated a feminine GRO, so the high preference for commercial entrepreneurship by the study's general sample provides a strong insight into the understanding of feminine entrepreneurs. This finding challenges the discriminatory discourse on entrepreneurship that fundamentally categorises people with a feminine GRO as more inclined toward social rather than commercial entrepreneurship (Datta, 2020; Meyer, 2022).

Although this study did not aim to examine the influence of race on the key variables for this research, it is an acknowledged fact that the discussion of race, entrepreneurship, and the social and cultural landscape, particularly in South Africa, comes with a legacy that includes experiences of segregation, fundamental inequality, and perceived injustice (Urban & Moloi, 2021). SA has a history of discrimination against blacks and women. In addition, there are persistent problems of exclusion and underrepresentation related to gender and racial discrimination, which in turn perpetuates increased perceptions and experiences of injustice by members of minority groups in their communities or environment (Pilvinyte, 2013; Urban & Moloi, 2021). The research found that a sizeable portion of the Black sample showed increased entrepreneurial propensity. This finding is noteworthy because it contradicts the notion that black South Africans show less entrepreneurial inclination (Herrington et al., 2017). Nevertheless, this finding relates to students and not those currently in the labour market, therefore, conclusions drawn from these findings must take this fact into account.

In summary, the discovery of a positive entrepreneurial inclination among those who are not only black but also have a feminine gender role represents an important finding in the South African entrepreneurship literature.

6.1 Theoretical and practical Implications

The study examined the moderating influence of mindsets on the relationship between GRO and EI, a further exploration of the mediating role of ATB, SSN and PBC on the relationship between GRO and EI was conducted. The results in this study provide considerable value in the understanding of entrepreneurship through the context of gender roles, mindsets, and culture.

Theoretical implications:

6.1.1 The integration of the non-binary concept of GRO, mindsets, and EI on the framework of the Theory of Planned Behaviour

According to the researcher, this is one of the first studies in South Africa to analyse the non-binary concept of gender role identification and entrepreneurial ambition using the construct of the TPB, with particular attention to mindset as an important moderating component. This may help to expand and improve the GRO and EI literature, as the relationship between GRO, mindset and entrepreneurial ambition has been understudied, leaving a large gap in the literature. The purpose of this study was to fill such a research gap and thus add to the body of knowledge.

In various respects, the study adds to the body of knowledge. First, by investigating and combining gender role orientations (masculinity and femininity) as determinants of entrepreneurship rather than biological sex. This is a significant milestone because previous research has been confronted with large discrepancies when it comes to the evaluation of entrepreneurship through sex (Chemaly, 2014); these results were inconsistent and at times inconclusive, necessitating a robust approach to incorporate into models of entrepreneurial intentions, in order to help us learn more about the differences in attitudes and intentions that exist even within

the same gender role groups (Mueller & Conway, 2013; Datta, 2020). The study adds value to current studies by employing a contextual approach. The positive relationship between GRO and EI in the South African context adds significant value to the literature by providing new evidence of positive attitudes toward entrepreneurship, despite the burden of gender roles and the neglect of GRO in gender equality policy and traditional research.

6.1.2 Methodological contribution that is context focused

As an extension of the previous argument, this research also offers insights gained using a far more reliable scale. Traditional research that sought to examine gender role identity (orientation) did not measure self-attributed masculinity and femininity, but a set of personality traits that distinguish men from women. For example, the PAQ and BSRI assess masculinity and femininity as superordinate constructs, with each construct represented by gender-stereotypical traits such as aggressive, friendly, and affectionate (Choi & Fuqua, 2003). Some traits cross-loaded in these scales and subsequent research has found that the factor structure is unstable.

In other words, the scales do not truly assess masculinity or femininity, but create these categories by endorsing a variety of traits and behaviours such as aggressive, friendly, and affectionate (Kachel et al., 2016; Nascimento et al., 2019; Kosminsky et al., 2022). This is a drawback of the study because gender role traits such as gentleness, dominance and attachment are dependent on culture and historical context. For example, the traits traditionally associated with gender roles of men and women are constantly evolving. Recently, traits formerly associated with masculinity have gained popularity among women, as modern women find many muscular traits fitting. On the other hand, feminine traits have also gained popularity among men. In the economic and socio-cultural times, we live in, gender role balance is a necessity for optimal thriving (Kachel et al., 2016; Bernstein & Chemaly, 2014). Therefore, the use of GRO addresses the limitations of a dependency of on traits to study GRO, as the meaning of traits evolve over time and as discussed, these traits have failed to load sufficiently in other studies, thus a concern of validity. This study used a measure that focuses on gender role

orientation on a global scale rather than specific indicators or attributes of femininity and masculinity.

6.1.3 Integration of desired entrepreneurial path (social & commercial entrepreneurship) with GRO and EI, leveraging SA context

This study also captured participants' desired entrepreneurial path, which was important because the researcher found that a sizeable portion of studies do not capture preference for the entrepreneurial path (commercial or social). The inclusion of this item in this study represents a theoretical contribution, as the study confirmed a high preference for commercial entrepreneurship among a sample of individuals with a feminine gender role. This is a ground-breaking contribution because it not only dispels existing gender biases that entrepreneurship is exclusively a masculine prerogative, but it also addresses the issue of how individuals with a feminine GRO are classified as candidates for exclusively social entrepreneurship. This is an incentive for future entrepreneurial research to investigate the preferred entrepreneurial pathways of students in South Africa, as this information is critical to informing policy and research direction. This is particularly important in South Africa, as many equity frameworks and curricula are shaped by academic insights (Boris & Moloi, 2021).

Even after decades of research on entrepreneurship, we know little about the experiences of entrepreneurs with a feminine gender role or even about such role models. There is consensus in the literature that inspirational stories foster the process of imitation, even if the context of these stories is not necessarily about success (Acheampong & Tweneboah-Koduah, 2017). Therefore, findings such as those in this study encourage the portrayal of entrepreneurs with a feminine gender role orientation that illuminate not only the glamorous, but also the less glamorous aspects of the commercial entrepreneurial journey. In this way, aspiring entrepreneurs with feminine gender roles can acquire lessons. Research by Acheampong and Tweneboah-Koduah (2017) shows that entrepreneurial inclination can also be cultivated by learning lessons from failure. For example, aspiring entrepreneurs can learn from the failures of entrepreneurs they admire or

look up to. Given the uncertainties associated with starting a business in South Africa, this is an excellent opportunity for such simulated learning. This learning, in turn, increases the likelihood of entrepreneurial success and encourages students to have the intention to start future entrepreneurial ventures.

6.1.4 Focused interventions to improve mindsets and the self-schemas of those with a feminine GRO

Although the purpose of this study was to assess the relationship between GRO and EI, it also examined how implicit person theories (mindsets) might moderate the relationship between these two variables. The inclusion of mindsets and GRO in the model of EI has led to new research approaches and questions. The positive relationship between GRO, mindsets and EI represents a unique contribution to the theory. This finding raises questions and motivation for the investigation of intervention approaches that target the mindsets of aspiring entrepreneurs with gender role strain (Shange, 2017). Therefore, the development of theoretical research on how targeted treatments might strengthen the self-schemas of individuals with feminine gender roles so that they can view their gender roles more positively in the context of entrepreneurship, despite social prejudices. To the researcher's knowledge, South African research publications examining implicit person theories along with GRO and EI are rare and appear to be virtually non-existent.

Overall, the scales used in this study were predominantly used in developed economies. Therefore, the current study allows generalisation of the results to contexts like South Africa. Furthermore, by demonstrating the validity and reliability of the instruments used, this study lays the groundwork for replicating the research in the future, whether in South Africa or in other countries that share the same economic and social characteristics as South Africa (Bruton et al., 2022).

6.1.5 Implications on entrepreneurial theory

Entrepreneurial research is inundated with studies that are limited in their ability to adequately generalise the findings and conclusions that have been made regarding the interaction between gender and EI (Smith, Sardeshmukh & Combs, 2016; Kumar, Paray & Dwivedi, 2021). Although the concept of gender has evolved significantly in disciplines such as sociology and psychology, this evolution has lagged in entrepreneurship research, resulting in a continued lack of integrated and coherent findings when it comes to the role of gender in entrepreneurship (Datta, 2020). Gender research on entrepreneurship often takes a binary and biological approach that ignores the influence of culture and social prescriptions on gender and the influence of time, context, and power struggles that shape people's gender and gender role identities (Mueller & Conway, 2013). Indeed, factors such as motivation and intentions have historically been studied through a binary lens, suggesting extreme uniformity between respective members of binary groups (men and women). However, this is far from the truth, as there are differences within the same gender role groups. This means that gender role orientation, as a socially constructed phenomenon, cannot exist in a vacuum but is influenced by contextual factors (Mueller & Conway, 2013; Zampetakis, Bakatsaki, Kafetsios & Moustakis, 2016). Given the gaps and inconsistencies in entrepreneurial research when it comes to gender studies, this study presented a validated, contemporary measure of gender roles that makes a solid contribution to the methodology and provides a foundation upon which future entrepreneurial studies can reliably build.

The contribution of newer measurement methods, validated in times of great cultural change in the way individuals perceive themselves and entrepreneurship as a construct, is of immense importance today as academic methods embrace change, need to be refined and evolve. It is true that some of the traditional methods and theories in entrepreneurship are influenced by the binary evaluation of entrepreneurs based on sex, which tend to negate aspects such as history and cultural context, resulting in the portrayal of women and feminine individuals as ill-suited for entrepreneurship (Schippers, 2007; Mueller & Conway, 2013), which in turn serves to reinstate the subordination of those who do not hold masculine

gender roles. For example, in this study, individuals who hold feminine gender roles were found to have great attitudes and perceived behavioural control toward entrepreneurship, this finding is consistent with studies in which the sample consisted of individuals with a masculine gender role (Vercruysse & Birkner, 2021), thus, this thesis argues for a revision in the representation of gender within entrepreneurship theory were GRO is used as a way in which people identity either than merely through sex. This work also builds on the limited research that tested the predictive validity of the TPB in South Africa with a feminine gender role-oriented sample group. Research on entrepreneurial intentions has focused primarily on gender in Western regions (Filatotchev, Ireland & Stahl, 2021; Bruton et al., 2021). This study was conducted with a feminine gender role-oriented sample in the Gauteng province of South Africa. Therefore, the results suggest that the TPB can be used to study the determinants of entrepreneurial intentions in the South African context. These findings are significant for entrepreneurship theory in South Africa, as Bruton et al. (2021), contests the applicability and consistency of theories and frameworks from developed countries to the context of developing countries.

Beyond the TPB, the variables of interest in this study were not limited to those included in the TPB. By adopting these new variables (mindsets and GRO), future research can explore alternative studies to expand the scope of entrepreneurial theory, which would allow for a robust and holistic analysis of the EI study in the South African context.

This research also expands the entrepreneurial literature by incorporating mindset into the EI framework. This thesis argues for the importance of incremental mindset in guiding positive behaviours (Burnette et al., 2020). Nevertheless, not everyone can muster the courage and mindset to succeed in business during tough economic times. Hunter and Scherer (2009) and Levy (2016) suggest that in times of crisis, one mindset (fixed mindset) eliminates opportunities, while the other mindset (incremental mindset) seizes opportunities. This study complements entrepreneurship theory by integrating the concept of mindsets into the EI framework, as indicated in the discussion section and throughout this thesis, mindsets are not rigid and can be positively changed through targeted intervention

methods and actual changes in the sociocultural context (Stoycheva & Ruskov, 2015; Jia et al., 2021). Therefore, mindset change can be promoted through targeted interventions to strengthen entrepreneurial intentions (Burnette et al., 2020). While this can lead to desired outcomes, in parallel, this paper has also highlighted the complexity of an influential relationship between variables. Despite advocating a growth-oriented mindset, it is not sufficient to hold such cognitive beliefs in solidarity. Instead, a growth mindset combined with a positive perception of gender roles enables an increasing spiral of propensity toward entrepreneurial intentions and, in turn, entrepreneurial activities (Japutra et al., 2019; Burnette et al., 2020).

This research presented a combination of factors and methods that contribute to entrepreneurial intentions and a positive perception of feminine gender roles. This represents a significant contribution to the entrepreneurship literature and provides users of academic research with a better understanding of what factors to focus on to inspire entrepreneurial growth. In addition, this work proposes a broaden and build approach as a framework to foster entrepreneurial intentions in individuals with a feminine gender role, meaning that it is important to first build (develop) positive emotions related to one's gender role and then expand one's repertoire of actions and personal resources of resilience, optimism, and hope. As a result, one can later draw on these repertoires and resources to improve one's entrepreneurial alertness, intentions, and resilience to sustain and grow one's business (Margaça, Hernández-Sánchez, Sánchez-García & Cardella, 2021; Maslakcı, Sesen & Sürücü, 2021).

In essence, this work refutes the ‘imagine an entrepreneur – imagine a masculine male’ narrative prevalent in the entrepreneurial literature. Research has shown that entrepreneurial self-efficacy is greater for individuals with a feminine gender role when exposed to an archetype of a successful entrepreneur with a feminine gender role than that of a masculine gender role (Rivera, Chen, Flores, Blumberg & Ponterotto, 2007; BarNir, Watson & Hutchins, 2011; Mueller & Conway Dato-on, 2013). These findings support the contribution of this thesis, which highlights the sample of this study as a potential reference point for individuals with a feminine

gender role, as the sample of this study self-identified as feminine and reported great attitudes and perceived behavioural control toward entrepreneurship. This reverses the concept of ‘think entrepreneur - think masculine male’ to a positive perception of gender role orientation is relevant for positive attitudes toward entrepreneurship.

Parallel to contributions alluded to above, an important contribution made by this thesis to the entrepreneurship literature is the discovery of self-identification of the students in this study. For example, incongruence between gender and gender role was found in this work: Students who identified as male also described themselves as having a feminine gender role orientation. This discrepancy offers some insight into the observed inconsistency of entrepreneurial outcomes in relation to gender when only biological sex is considered as a determinant of entrepreneurial propensity (Marlow, 2012; Mueller & Conway, 2013). This finding serves as a theoretical and methodological turning point for future entrepreneurial research.

In sum, despite the transition to and consideration of gender role orientation and the feminist’s analysis in behavioural studies, the contemporary entrepreneurship literature is still flooded with studies that merely juxtapose males and females and negate constructions of gender and gender role orientation (Datta, 2020). Excessive reliance on such reports has led to methodological and policy limitations. More importantly, such reports have contributed to the subordination of feminine-oriented individuals; indeed, some of the more recent work continues to emphasise and re-establish this subordination, subjecting entrepreneurial research to stagnation and outdated observations. Therefore, this work challenges the inherent male and female comparative approach, which, as discussed in this paper, tends to perpetuate the subordination of those with a feminine GRO.

The overall contribution of this study is to present an argument that observes a transformation in the conceptualisation and construction of gender and entrepreneurship itself, especially in a culturally diverse country like South Africa. In order to produce reliable and robust results, this thesis not only acknowledges

these shifts in the conceptualisation of gender, but also ensures that this is accompanied by a corresponding shift in methodology.

6.2 Practical implications

Given that this study was conducted among students, this paper contributes to how educational institutions could focus on the investment of entrepreneurial education that is not detached from a South African context. This education can also be coupled with practical scenarios of both feminine and masculine entrepreneurs, highlighting realistic and relatable role models for all gender groups. The educational institution can also start to think about which entrepreneurial intervention activities and training are more suited for those with feminine gender role orientation, over and above just interventions governed by biological sex.

As an extension of practical implications, the study's central finding that a feminine gender role identity interacts positively with entrepreneurial intentions via attitudes toward behaviour, subjective social norms and perceived behavioural control will enable academic institutions and, entrepreneurship policymakers, to develop entrepreneurship programs that focus on the antecedents of entrepreneurial intentions while taking environmental adversity that individuals with a feminine gender role identity experience into account (Nowosenetz, 2008; Carrieri, Diniz & Menezes, 2013; Shange, 2017). The consideration of this context will enable those with a feminine GRO to experience role congruence to entrepreneurship as a viable profession; this, in turn, will shape the right initiatives not only for masculine-oriented individuals, but also for those with a feminine GRO.

This is one of the few studies that has found a favourable relationship between a feminine GRO and entrepreneurship, as well as an increased propensity for commercial entrepreneurship in a feminine gender role-oriented population. This discovery not only dismantles the persistence of gender stereotypes that claim entrepreneurship is a male prerogative, but it will also address the problem of fewer role models or references of feminine entrepreneurs as a result of such rigid and outdated narratives (BarNir et al., 2011; Rivera et al., 2007; Matsila, 2020). Attributing feminine characteristics to entrepreneurship will promote recognition and

awareness of entrepreneurial archetypes with feminine GRO, resulting in more diverse entrepreneurs being represented.

In addition to the contributions denoted above, the results of this study could serve as a basis for the promotion and support of those with a feminine gender role. Gender role orientation stems from social structures of gender, many of which maintain a subjugated self-image for people with a feminine gender role (Scott, 2018). However, people with a feminine GRO should be supported to develop counter-narratives of femininity, that is, to create feminine identities that integrate their self-concepts and reflect their hopes, goals, and dreams. This is critical when people with a feminine gender role orientation come from rural areas because rural areas are isolated from the institutions of power and sometimes from media coverage, which means they do not have access to credible role models, in other words, role models who have done the work of rebuilding and creating a feminine identity that includes themselves and is not just the embodiment of society's default (Matsila, 2020). Therefore, people in Gauteng province and in many other progressive regions have the privilege of encountering new role models who are important to envisioning a different understanding of femininity. Supporting those who hold a feminine gender role is necessary in the South African context, the country is based on a legacy of inequality that has led to a society that is divided in several respects (Chimucheka, 2013; Galawe, 2017; Boris & Moloi, 2021). In addition to racial segregation, there is also segregation by place, socioeconomic status, and gender role (Chimucheka, 2013; Shange, 2017). This study’s contribution is highlighting these contextual factors and providing an argument for future entrepreneurial research to examine the influence of such dynamics within context and to assess the impact of such constructs on students who want to become entrepreneurs. This research will also encourage those with a feminine GRO to re-evaluate their gender role identity and assess the power they hold outside the confines of the environment from which they come.

6.2.1 Implications on the current South African context

This study has shown that attitudes toward entrepreneurship are high among those who hold the feminine gender role. Therefore, this finding is critical to changing mindsets and perceptions that assume people with a feminine gender role are inherently not entrepreneurial. The results of this study will stimulate much-needed entrepreneurial inclination among those whose gender roles were previously considered irrelevant to entrepreneurship. This in turn could increase the pool of diversity and entrepreneurial participation in South Africa. This is important because research has reported low entrepreneurial activity in South Africa (Bowmaker-Falconer & Meyer, 2022), particularly among those with a feminine gender role orientation. The low level of entrepreneurial activity in South Africa is a crisis because entrepreneurial productivity is seen as a crucial factor in a country's progress (Meyer, 2022). In South Africa, this is even more important given the social ills facing the country. Recently, the South African economy has come under severe pressure. On the one hand, the economy is characterised by slow growth, rising inflation and government debt (Galawe, 2017; Bowmaker-Falconer & Meyer, 2022). In addition, unemployment remains a major socioeconomic problem. Given the socioeconomic challenges facing the country, a breakthrough in the composition of an ecosystem of entrepreneurial prospects is paramount because the state of the economy depends on such diversity and this research presents feminine entrepreneurs as an untapped potential that offers the opportunity to turn things around for South Africa. Entrepreneurs who align with the feminine gender role provide fertile ground for new opportunities, especially as the ongoing impact of COVID-19 requires new and creative ways to compete (Ratten, 2020; Uansa-ard & Wannamkok, 2022; Lopes, Gomes, Santos & Oliveira, 2021).

The COVID -19 pandemic undoubtedly led to the collapse of large companies and small and medium-sized entities in South Africa (Falconer & Meyer, 2022). Due to the changed economic environment brought about by the COVID-19 pandemic, the methods entrepreneurs use to compete no longer produce the same results as before (Boris & Moloi, 2021). This is because the establishment and maintenance of a business is susceptible to the influence of the economic environment. COVID-

19 is a notable factor that influences entrepreneurial intentions and activities. Recent studies have shown that COVID-19 significantly regulates the strength of a connection between PBC and EI of final year students (Krichen & Chaabouni, 2021; Doanh, Thang, Nga, Van & Hoa, 2021). This may be attributed to, among other things, the perceived risk, lack of feasibility and certainty of establishing and operating a new enterprise due to the unstable environment (Doanh et al., 2021). Nevertheless, in a study conducted among individuals with a feminine GRO, the COVID-19 crisis was cited to have influenced the participants' perceptions of entrepreneurial success positively (Uansa-ard & Wannamkok, 2022; Lopes, Gomes, Santos & Oliveira, 2021). In the literature, people with a feminine GRO are described as open-minded and creative. Therefore, it is likely that people with a feminine GRO have the potential to create creative and viable entrepreneurial ventures due to their creative approach to challenges, thereby mitigating the impact of the pandemic on the South African economy. Based on the above discussion, an important implication arising from this study that stands to inform the context of SA is that entrepreneurial research, educational initiatives, and government policy are presented with a new insight into examining gender within the scope of entrepreneurship and this study has also provided evidence of entrepreneurial potential among final year students with a feminine gender role. Thus, in times of economic decline, it may be critical to promote the entrepreneurial aspirations of those who hold a feminine gender role, as they are likely to be key players in providing innovation and creative solutions to crises, thus providing a potential solution to South Africa's unemployment and slowed economic development.

6.3 Recommendations

This study recommends that the curriculum in South Africa should include mindset interventions. This is because, despite GRO, people tend to bring their beliefs into situations and if those beliefs are codified, they are unlikely to have a positive attitude toward desired outcomes in those situations (Carr et al., 2012; Shange, 2017). This is low-hanging fruit for educational institutions and enterprise development structures, because although mindsets can be improved through long-

term, targeted experimental intervention methods, they can also be improved through situational suggestion and triggers, such as imagery and content associated with success stories and case studies (Carr et al., 2012, Walter, 2016). In addition to the above, mindset interventions can also focus on attributions or reasons people give for their actions, for instance, the GEM report pointed out that people do not endeavour to start a business because of fear of failure (Bowmaker-Falconer & Meyer, 2022), which is linked to perceived inability or deficiency of skills and abilities (Levy, 2016). This is surprising considering that some of these people have had entrepreneurial training. This shows that a change in thinking is crucial. It is necessary to attribute failures on the path to self-employment to strategy, rather than blaming ability, all of which will seem uncontrollable if one has a fixed mindset. Instead, an attribution of failure to strategy encourages learning and develops one's efficacy and resilience through trials (Levy, 2016; Song et al., 2020).

Concentrating on controllable factors is critical to turning efforts into actions (Woods et al., 2002; Brez et al., 2020). Be that as it may, even though this study recommends developing a growth mindset, it has been found that GRO is significantly influenced by cultural cues, some of which are barriers to entrepreneurial activity (Neneh, 2012; Burnette et al., 2020). Therefore, in recommendation of mindsets, this study further recommends empowerment; other studies argue that adopting a growth mindset without empowerment does not manifest in desired behaviours; (Neneh, 2012; Burnette et al., 2020) thus, the recommendation of support as a token of empowerment is discussed next.

The above section and the findings of this study suggest that while individuals with a feminine GRO might have a growth mindset and the intention to one day start a business, it should not be assumed that this will automatically happen without empowerment. Therefore, even though the intention and mindsets are there, the literature review has alluded to social factors, which could still act as a barrier for a manifestation of entrepreneurial behaviour among these individuals (Patrício & Ferreira, 2023). As such, it is of the utmost importance that for structures that aim to develop and empower entrepreneurs create environments that do not suggest incongruence between people with a feminine GRO and entrepreneurship; these

spaces must take steps to ensure inclusion within these environments (Patrício & Ferreira, 2023).

For example, simply including people with a female GRO can signal the entrepreneurial environment as congruent with people who hold a feminine GRO. In addition, these spaces can tell the stories of established and successful women entrepreneurs' GRO by providing such individuals as mentors (Ozasir Kacar, Essers & Benschop, 2023; Ali, Jabeen & Burhan, 2023). The voices of such mentors are significant as this relates to the concept of socialisation discussed in the literature review (Eddleston & Powell, 2008; Mikkola, 2007; Kaki, Mignouna, Aoudji & Adéoti, 2023). What is normal in a society does not happen automatically and is certainly not adopted immediately, but rather through socialisation, where one learns from others, especially individuals who are known to have social validity in the areas in which people must act (Shange, 2017).

This socialisation process is critical to developing cognitions of efficacy and a growth mindset (Scott, 2020). Just as gendered role pressures can cause people to develop doubts about their own abilities and hold rigid beliefs about the flexibility of their own capabilities, it is also true that positive reinforcement aimed at creating consistency between GRO and entrepreneurship has the potential to develop a growth mindset and perceived behavioural control (Levey, 2015). If newer attributes and cognitions related to gender roles and entrepreneurship are not socialised and reinforced, then existing channels will continue to reproduce and maintain existing normative beliefs and prescriptions (Nowosenetz, 2008): in this case slowing a process of change and ultimately leaving the problems of low EI unchanged.

6.4 Limitations

This study, like most others, has shortcomings, which point to novel directions for future research:

- The results of this study are limited by the sample. Although that the study had a big sample size of final undergraduate students, some of its conclusions cannot be generalised to all genders, such as, trans gender and gender fluid people. These gender groups were not sufficiently represented;

as such, future research could extend its reach to gather insights from most of the gender groups over and above just men and woman.

- Moreover, given that only students were surveyed, inferences made from this research to non-students would have to be made with caution, the examination or replication of this study among individuals within the labour market could yield different results.
- Despite assurances of anonymity, self-administered surveys may contain bias. Given the sensitivity of gender and gender role orientations, some respondents may have given answers that they consider socially and culturally appropriate.
- The study also focused on students in South Africa, so the results are primarily relevant and generalisable to this setting. To increase generalisability, future research should consider expanding this study to other African emerging markets. This study argued that the decision to become an entrepreneur, as well as preferences for the type of entrepreneurial path, may differ even among African emerging markets, other African settings can be heterogeneous with considerable within-state cultural variations. This is particularly important because concepts and ideas do not have the same meaning in diverse cultures and may even change over time. Therefore, an examination of this research in other African regions could complement these findings and provide a good avenue for future research.
- Because this study was cross-sectional, the ability to demonstrate causality among the variables of interest was limited. To demonstrate causal relationships, future studies should use a longitudinal approach.

6.5 Future research

This survey was strictly quantitative; therefore, for a study that captures respondents' self-ascriptions of gender role orientations, it is probable that certain ideas and views were omitted, as a result, incorporating a qualitative technique (interviews) into the methodology of this study might assist in acquiring a deeper understanding of respondents' perceptions. If used in the future, this hybrid

technique approach might provide the researcher with more robust and informative results.

To further improve the robustness of our results, future research should extend this study to provinces other than Gauteng and repeat the study over a longer period to determine causal relationships among factors. To improve the derived value in the future, researchers could also expand this study to include individuals who are not students.

Another finding that may be useful for future research is the inclusion of psychological capital in models of entrepreneurial intentions. Several authors note the influential role of psychological capital attributes, for example, resilience, self-efficacy, optimism, and hope, on intentions (Margaça, Hernández-Sánchez, Sánchez-Garca & Cardella, 2021; Levy, 2016). Even if someone has a growth-oriented attitude, they may not show a firm intention to seize opportunities when their personal resources of resilience, hope and self-efficacy are dormant or depleted. Therefore, further research on these characteristics (resilience, hope and self-efficacy) in the context of moderation and mediation between GRO and EI may further illuminate our findings.

Based on the evaluation of this work, another crucial construct that could shed light on our findings is procedural fairness and environmental feedback to role models. These factors are among the crucial constructs that can be used to explain entrepreneurial intentions, particularly regarding the function of a fair process in creating an equal environment for all. It is expected that members of minority groups have a distinct experience of procedural fairness than their peers. As alluded to before, women, transgender persons and persons of fluid gender are among those who lean toward the feminine gender role and the treatment of some of their role models by the society may affect not only their mindset, but also their entrepreneurial aspirations. Therefore, future studies should focus on how participants perceive procedural justice vis-à-vis their role models and how this affects their assessment of entrepreneurship as a career option.

Future studies may look at replicating this study in rural areas because although there are studies on gender role orientation, such research is still lacking in the rural context of South Africa. Of the studies that do address student gender role orientation, most of the findings come from the narratives of students in the country's major cities, namely Johannesburg, Durban, and Cape Town; furthermore, these studies predominantly relate to the Western context.

A study conducted among Venda women in South Africa showed that trying to be an independent career or businesswoman is not always supported, but met with rejection rather than approval (Matsila, 2020). Many of the feminine-oriented young people from this part of the country suffer the same fate, as their feminine gender role is understood through a patriarchal lens, in other words, obligation to silence and obedience and the constant need for masculine affirmation regarding one's position in society (Matsila, 2020). This is reflected in the fact that people with a feminine gender role are conditioned and forced to use masculine men as a reference point for behaviour and norms. Therefore, such beliefs serve as a platform on which inequality is reproduced through the subordination of people with a feminine gender role. Independence and engaging in entrepreneurial pursuit are considered deviant for those with feminine gender role, instead, these individuals are likely to be forced into obedience and some may choose acceptance and silence in fear of being branded as disobedient, thus reinforcing patriarchal ideologies of femininity.

Future research could also focus on a qualitative study that captures the experiences of entrepreneurs and non-entrepreneurs with a feminine GRO. There is a lack of exclusive research dedicated to this study. Instead, the focus is on examining women's experiences compared to men's, which is not a robust approach to studying gender roles. Historically, this approach has negated the diverse and complex voices of those who identify with gender roles outside of their sex. To reclaim these suppressed voices, future research must aim to decipher the sociocultural and socioeconomic frameworks that influence the construction of gender roles and the experiences of those who defy gender role norms.

Finally, this study opens the possibility of examining intervention approaches that target the mindset of aspiring entrepreneurs with gender role strain. Future studies could also explore how tailored interventions can improve the self-schemas of individuals with feminine gender roles so that they can more positively perceive their gender roles in relation to entrepreneurship despite societal biases.

6.6 CONCLUSION

This study makes a valuable contribution to research by shedding more light on the relationship between gender and EI. But more importantly, this work has brought us closer to evaluating gender and EI from a non-binary perspective. The findings of this work encourage a more comprehensive examination and exploration of gender as a continuum, especially in the entrepreneurial literature, as much of the previous research has focused on gender as a binary construct, for example, male = 1, female = 2 and it has been argued that this approach does not lead to a solid understanding of EI, as recent discoveries confirm that gender roles have evolved and the desirability of masculine and feminine traits has become significantly more desirable to all (Bernstein, 2014; Chemaly, 2014). More so, people today have different expressions of masculinity and femininity within their respective genders. Indeed, this research concludes that students in the Gauteng region of the country hold a feminine GRO. This is in line with the argument that people in South Africa do not necessarily adhere to traditional gender role specifications as was expected in the past (Bernstein, 2014; Chemaly, 2014). Therefore, going forward, in an attempt to map the entrepreneurial pipeline and to boost the South African ecosystem vitality, this research calls on the government structures to zone into the untapped potentials of individuals with a feminine GRO thus address the call of low EI in South Africa. Entrepreneurship is seen as a process (Sundelson, 2020). Rather than viewing the inclusion of people with a feminine gender role orientation as an event, government entrepreneurship programmes and policies should focus on a long-term strategy that focuses on creating an enabling environment, providing support and monitoring the effectiveness of these efforts that specifically target people with this gender role orientation.

The overall conclusion of this study is that GRO and growth mindset positively influence entrepreneurial intentions in South Africa as modelled by the TPB. Based on the literature review conducted in this study and the discussion of the findings, it is clear that the sociocultural and entrepreneurial context of South Africa is dynamic (Lyness & Heilman, 2006; De Bruin, Brush & Welter, 2007; Bajpai, 2014). For example, the students in this study, although living in the same country, may be exposed to multiple cultural influences because South Africa is multicultural, which provides an opportunity to gather indigenous knowledge (Lyness & Heilman, 2006). The extension of TPB theory in this context lends realism to the model and the claims and conclusions of this study and means that future questions that will arise from this research will contribute to an accumulation of indigenous knowledge in South Africa so that theoretical frameworks that originate in South Africa can emerge to open up new areas of research, particularly in relation to GRO and EI, as the management literature is flooded with Western assumptions and perspectives (Adamus et al., 2021; Bruton, 2022). In truth, many of the global theories have their origins in indigenous theories and it is high time that African theoretical frameworks emerge as there is sufficient evidence that certain problems, insights and beliefs are unique to Africa.

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Appendix A

Appendix A1a: Participant information sheet

The University of Witwatersrand, Johannesburg
Graduate School of Business Administration
2 St David's Place, Parktown, Johannesburg, 2193,
South Africa
P O Box 98, WITS, 2050
Telephone: +27 11 717 3621

14 December 2021

Dear Sir/Madam

My name is Jeremia Moloi, and I am a PhD student in Management at the University of the Witwatersrand Johannesburg. As part of my studies, I am required to conduct a research project. I am investigating *the relationship between gender role orientation (GRO) and entrepreneurial intentions (EI) and the moderating influence of Mindsets on this relationship among university students in South Africa* under the supervision of professor Urban Boris. The aim of this research is to understand the factors associated with the intention to engage or behave entrepreneurially.

As part of this project, I would like to ask you to participate in answering an online questionnaire on a secure, website (Qualtrics). The questionnaire consists of a total of 26 questions on: Gender Role Orientation, Entrepreneurial Intentions (EI) and Mindsets.

Participation in this study is voluntary and there is no personal cost to you for participating in this study. There is no advantage or disadvantage to you for completing or not completing the questionnaire. You have the right not to answer any question if you do not wish to do so, or to withdraw from the study at any time for any reason without penalty. Your responses are anonymous and confidential. No identifying information, such as your name or ID number, will be requested. Your IP addresses are also not collected and the information you provide is kept secure and not shared with anyone else. Completion of the questionnaire will be taken as consent to participate in the study.

If you have any questions during or after the study, please feel free to contact me using the contact details below. This study will be written in the form of a research report that will be accessible online through the University Library website. Data collected as part of this research project will be stored and protected on a secure, password-encrypted website (Qualtrics). Data will be retained for a minimum of five years after completion of the project and then destroyed. With your consent, data collected as part of this research project may be used by other researchers in anonymised form. If you have any concerns or complaints regarding the ethical procedures of this study, please feel free to contact the University's Human Research Ethics Committee (non-medical), telephone +27(0) 11 717 1408, email hrecnon-medical@wits.ac.za.

Yours sincerely
Jeremia Moloi

Researcher:
Jeremia Moloi, jeremia.moloi1@students.wits.ac.za, 0711060529

Supervisor:
Professor Urban Boris, Boris.Urban@wits.ac.za, 011 717 3762

A1b: Letter requesting permission

The University of Witwatersrand, Johannesburg
Graduate School of Business Administration
2 St David's Place, Parktown, Johannesburg, 2193,
South Africa
P O Box 98, WITS, 2050
Telephone: +27 11 717 3621

14 December 2021

Dear Sir/Madam,

Re: Permission to conduct research at University of the Witwatersrand

My name is Jeremia Moloi, and I am conducting research to fulfil the requirements for a PhD in Management (Entrepreneurship) at the University of the Witwatersrand, Faculty of Commerce and Management.

I seek permission to conduct research at the University of the Witwatersrand. The focus of this study is to examine the relationship between gender role orientation (GRO) and entrepreneurial intentions (EI) and the moderating role of Mindsets, also known as mindsets, on this relationship. This study proves significant in today's world considering the economic downturn due to COVID- 19, low employment opportunities, and high poverty. There is a growing consensus that entrepreneurship is a critical driver for discovering, exploiting and creating new opportunities to launch new businesses and products. Therefore, it is important to understand the factors associated with the intention to engage or behave entrepreneurially.

The target population for this study is final year students at the University of the Witwatersrand in South Africa, Gauteng Province. The following faculties are eligible to participate Commerce, law and Management Sciences, Humanities, Agriculture & Environmental Sciences, Health Sciences, and Engineering. To participate in this study, students will be required to complete a questionnaire that will take approximately 10-15 minutes to complete. The questionnaire includes demographic variables, Gender Role Orientation (GRO), Mindsets and Entrepreneurial Intentions scales.

By completing the questionnaire, students agree to participate in the study and acknowledge that their participation in this study is voluntary and that they have the right to withdraw from the study at any time for any reason, without penalty. Their responses are anonymous and confidential. No identifying information, such as their name or ID number, will be requested, nor will their IP addresses be collected; the data will be processed only by the researcher and their supervisor. Therefore, anonymity and confidentiality will be maintained in all written and published work based on this study. There are no foreseeable risks in participating in this study and there is no advantage or disadvantage in completing or not completing the questionnaire. The data will be stored and protected on a secure, password-encrypted website (Qualtrics) and in a password protected computer. Identities of participants will not be exposed as no identifying information, such as their name or ID number, will be requested, nor will their IP addresses be collected.

I am therefore writing to request permission to conduct my study in your institution. The letter of permission should be written on your organisation's letterhead, signed and dated, and should specifically refer to my name and the title of my study.

Please let me know if you need any further information. I look forward to your response as soon as it is convenient.
Yours sincerely
Jeremia Moloi

Researcher:
Jeremia Moloi, jeremia.moloi1@students.wits.ac.za, 0711060529
_____
Supervisor:
Professor Urban Boris, Boris.Urban@wits.ac.za, 011 717 3762

A2: Research instruments

Pre-screening (qualifying) Questions

Are you a registered final year student at university?

o Yes, please continue (1)
o No, unfortunately you cannot continue, you may exit the survey. Thank you for your interest and consideration (2)

Do you have/own an operating business?

o No, please continue (1)
o If yes, unfortunately you cannot continue, you may exit the survey. Thank you for your interest and consideration (2)

Are you 18 years and older?

o Yes, please continue (1)
o No, unfortunately you cannot continue, you may exit the survey. Thank you for your interest and consideration (2)

Demographic Questionnaire

Please indicate your field/area of study

o Commerce, law and Management Sciences (1)
o Humanities (2)
o Agriculture & Environmental Sciences (3)
o Health Sciences (4)
o Engineering (5)
o Other, please specify (6) _____

Please indicate the gender to which you identify.

o Man (1)
o Woman (2)
o Transgender man (3)
o Transgender woman (4)
o Non-binary (5)
o Gender-fluid (6)
o Other_ How do you currently describe your gender identity? (7)

Please indicate your race

o Black (1)
o White (2)
o Coloured (3)
o Indian (4)
o Asian (5)
o Other, please specify (6) _____

The Gender Role Orientation (GRO) questionnaire

The following questions focus on self-ascribed masculinity/femininity.

Each item must be evaluated in terms of the two opposing qualities. You are to choose a number that indicates where you are on the scale. For example, if you are very masculine, you might choose 1. If you think you are only moderately masculine, you might choose 4, and so on. Your responses are anonymous and confidential. Please be open and honest in your responses.

			1	**2**	**3**	**4**	**5**	**6**	**7**	
		Very **masculine**								Very **feminine**
1.	I consider myself to be ...									
2.	Ideally, I would like to be…									
3.	Traditionally, my interests would be considered as…									
4.	Traditionally, my attitudes and beliefs would be considered as...									
5.	Traditionally, my behavior would be considered as…									
6.	Traditionally, my outer appearance would be considered as…									

The Mindsets questionnaire

Using the instrument below, please indicate the extent to which you agree or disagree with each of the following statements. The instrument consists of 8 questions scored along a 7 - point scale from 1 = strongly disagree to 7 = strongly agree. Please answer each statement as honestly as possible. This questionnaire is anonymous.

		Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
1	The kind of person someone is, is something very fundamental about them and cannot be changed very much.							
2	People can do things differently, but the important parts of who they are cannot really be changed.							
3	Every person, no matter who they are, can significantly change their basic characteristics.							
4	Although I hate to admit it, you cannot teach an old dog new tricks. People cannot really change their deepest characteristics.							
5	People can always significantly change the kind of person they are.							
6	Every person is a certain kind of person, and there is not much you can do to really change that.							
7	No matter what kind of person someone is, they can always change a great deal.							
8	All people can change even their most basic qualities.							

Entrepreneurial Intentions questionnaire

This section consists of 18 questions scored along a 7 - point scale from 1 = strongly disagree to 7 = strongly agree. Please answer each statement as honestly as possible. This questionnaire is anonymous.

Attitude Towards Behaviour (ATB)

		Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
1	A career as an entrepreneur is attractive to me							
2	Being an entrepreneur would give me great satisfaction							
3	Among the various career options, I would prefer to be an entrepreneur							
4	Being an entrepreneur has more advantages than disadvantages for me							

Subjective Social Norms (SSN)

		Strongly Disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
1	My immediate family values the entrepreneurial career more than any other career							
2	My friends value the entrepreneurial career more than any other career							
3	My immediate family would approve of my decision to start a business							
4	My friends would approve of my decision to start a business							

Perceived Behavioural Control (PBC)

		Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
1	I am prepared to start a viable business							
2	Starting a business and keeping it viable would be easy for me							
3	I know the practical details necessary to start a business							
4	If I were to try to start a business, I would have a high probability of success							

Entrepreneurial Intention (EI)

		Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
1	I am willing to do anything to become an entrepreneur							
2	My professional goal is to become an entrepreneur							
3	I will make every effort to start and run a business							
4	I am determined to start my business in the future							
5	I am thinking very seriously about starting a business after I finish my studies							
6	I have a firm intention to start a business some day							

Preference of an entrepreneurial path

Please read the following terms to understand the difference between social and commercial entrepreneurship. After reading the short descriptions, you can answer the following question:

If you were to become an entrepreneur, would you rather be a social entrepreneur or a commercial entrepreneur? Please distribute the 100% between the two options. For example, if you prefer only social entrepreneurship, then you would allocate 100% to social entrepreneurship and zero (0%) to commercial entrepreneurship. However, if you also have a moderate preference for commercial entrepreneurship, then you might allocate 70% to social entrepreneurship and 30% to commercial entrepreneurship, and so on. The split between the two must be equal or add up to 100%.

Social entrepreneur: ___%

Commercial entrepreneur: ___%

Understanding of the Terms ‘Social Entrepreneur’ and ‘Commercial Entrepreneur’

A social entrepreneur runs a business (the social enterprise) that has a social mission in addition to its financial goals - and that social mission is the more important of the two. This means that the primary goal is to address a specific social problem, such as poverty or homelessness. This goal is pursued within the context of the business, for example by integrating affected groups into the business model. Nevertheless, it is a business and not a voluntary service, as revenue is generated, and the company operates competitively in a market. Because of this perspective,

decisions are always made in favour of the social cause at heart - even if this means lower revenues or wages.

A commercial entrepreneur, Will also compete in a market with innovative ideas, but his decisions will focus on maintaining and growing the business. In this way, he secures jobs, income, and payments to shareholders while running a successful business in a competitive environment.