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The role of culture and environmental factors on entrepreneurship in Johannesburg, South Africa

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A research report submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Management, Entrepreneurship and New Venture Creation

Johannesburg, 2021

ABSTRACT

This paper investigated the entrepreneurial intentions of high school learners in Johannesburg, South Africa. The study was based on the entrepreneurial event model and the theory of planned behaviour. The objective of the study was to test whether these models could help explain the entrepreneurial intentions of high school learners in a South African context and whether the results would differ from the traditional Eurocentric studies given the country's cultural and environmental nuances. The study took further to understand the perceptions of the regulatory environment and whether this impacted the relationship between entrepreneurial intention and its antecedents, perceived desirability and perceived feasibility. The study was conducted by means of a survey using a structured questionnaire. Descriptive statistics and multiple regression was used to analyse the data. The results indicated that the entrepreneurial intention of the students could be predicated by their attitude towards becoming an entrepreneur as well as their perceived desirability of entering entrepreneurship. The questionnaire was found to be a valid instrument in measuring entrepreneurial intention of high school learners in Johannesburg, South Africa. Recommendations for legislature, educators and researchers have been highlighted.

Keywords: *Entrepreneurial Event Model, Entrepreneurial intention, environmental factors, high school learners, Johannesburg, South Africa, Theory of Planned Behaviour*

DECLARATION

I, Mitesh Lakha, declare that this research report is my own work except as indicated in the references and acknowledgements. This report is submitted in partial fulfilment of the requirements for the degree of Masters of Management at the University of the Witwatersrand, Johannesburg. This report has not been submitted before any degree or examination in this, or any other university.

MLAKHA

Mitesh Lakha

Signed at ……Sandton…… on the …12th… day of

……July…… 2021

DEDICATION

To my Mum, my Dad and my Hasmita - Thank you for everything!

To Darryl Grater – thank you for pushing me beyond my capabilities every single day and for motivating me to get this across the line.

To the entire DIDS team – thank you for inspiring to me to be as great as each and every one of you are; every single day.

To all the leaders that I've had the privilege of working with: Erika Martin ; Ryno de Kock ; Herman Scheepers ; Matthew Rosenberg.

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1. INTRODUCTION

Theories such as the theory of planned behaviour (Ajzen, 1991) and the entrepreneurial event model (Shapero & Sokol, 1982) inform the basis for the relationship between perceived desirability (as an antecedent) and entrepreneurial intention. These theories, however, have their underpinnings in Western, and more developed, countries (Moriano et al., 2012; Sesan, 2013). This study sets out to understand the effect that environmental factors have on the relationship between perceived desirability and entrepreneurial intention. The study will take place in an under-researched country, South Africa in the capital city - Johannesburg.

1.1 Theoretical background to the study

The study has theoretical roots in intentions and their antecedents based on the theory of planned behaviour (Ajzen, 1991) and the entrepreneurial event model (Shapero & Sokol, 1982). Socio-psychology theories of behaviour is where intentions are entrenched (Bandura, 2001).The two most expansively used theories to explain intention are the theory of planned behaviour (hereafter TPB) and the entrepreneurial event model (hereafter EEM) (Marcati, Guido, & Peluso, 2008).

The TPB advocates that one's opinion with regards to attitude and control influences their behaviour (Ajzen, 1991). The TBP makes reference of three values each with their own attitudinal antecedents. Attitude towards the act is based on expected values and beliefs about their outcomes. Perceived feasibility is linked to perceived self-efficacy and subjective norms are based on normative beliefs - expected support (Venter et al., 2015). The EEM model suggests that intentions perceived desirability, propensity to act and perceived feasibility (Drnovsek & Erikson, 2005). In this model, perceived feasibility also stems from perceived self-efficacy (Venter et al., 2015).There is an overlap between the TPB and the EEM. Perceived feasibility from the EEM corresponds with PBC from the TPB and perceived desirability from the EEM corresponds with attitudes from the TPB (Krueger, Reilly, & Carsrud, 2000).

South Africans exhibit low levels of entrepreneurial intentions (Herrington, Kew, & Kew, 2014). Entrepreneurship is pivotal to economic development (Liñán, Nabi, & Krueger, 2013). The TPB has been used in previous studies to test intentions in developing countries and has been found relevant in this regard (Malebana, 2014). The EEM has also been increasingly popular in entrepreneurship research (Segal, Borgia & Schoenfeld, 2005; Schlaegak & Koenig, 2014). These theories therefore formed the basis for testing for entrepreneurial intention in this study.

1.2 Context of the study

South Africa is a developing country in Africa. Whilst it is considered to be an upper-middle income country in terms of per capita income, it also has one of the highest GINI coefficients in the world, which refers to the distribution of income (Lediga, Riedel, & Strohmaier, 2019). South Africa has the lowest TEA rate (Total Early-Stage Entrepreneurial Activity) from all of the developing countries that are measured in the GEM (Global Entrepreneurial Monitor) report as noted by Urban (2006) and more recently cited in the GEM report of 2014. Institutional theory has been used to examine and understand how entrepreneurial activity is shaped in different economies (Stenholm, Acs, and Wuebker 2013; Welter and Smallbone 2011; Urban 2019). Prior research indicates that both the level and type of entrepreneurial activity is shaped the institutional environment (Valliere and Peterson 2009). The study was conducted using high school learners from Johannesburg South. Gauteng is the most densely populated province in South Africa and is also the nation's biggest provincial economy contributing the most to the nations GDP. Understanding entrepreneurial intentions and the perceived regulatory environment amongst high school learners in Johannesburg can contribute further to the national imperative of creating further employment and reducing poverty in a sustainable manner.

1.3 Problem Statement

South Africa has a high unemployment rate which is a concern for young South Africans. Across 2013 to 2019, the youth unemployment rate in South Africa has averaged 52.43% (Trading Economics, 2019). Formal employment is challenging as there are more individuals entering the

job market than the number of jobs that are being created (Peyper, 2017). The entrepreneurial landscape in South Africa has been consistently tracked through the Global Entrepreneurship Monitor reports and entrepreneurial intentions in South Africa was reported at 11.7% in 2017 versus an Africa average of 33.4% (Herrington, Kew & Kew, 2014). Despite various efforts and initiatives from the South African government to stimulate entrepreneurial activity, the entrepreneurial intentions of South Africans have remained low over the last 7 years (Trading Economics, 2019). This research investigated the effect of perceived environmental factors on high school learners' intention to pursue entrepreneurship as a career path

1.4 Research purpose and aims of the study

This study focused on high school learners in Johannesburg, South Africa. Both fundamental theories of intention, the TPB (Ajzen, 1991) and the EEM (Shapero & Sokol, 1982) suggest that external factors such as environmental factors are not presumed to moderate the relationship between entrepreneurial intention and its antecedents. The aim of this study was to test whether environmental factors have a moderating or mediating effect on the relationship between entrepreneurial intention and its antecedents. The study tested the relationship between entrepreneurial intention and perceived desirability and perceived feasibility respectively. The study further tested the effect that environmental factors had on the relationship between perceived desirability and entrepreneurial intention, and perceived feasibility and entrepreneurial intention amongst high school learners in Johannesburg South.

1.5 Significance of the study

The importance of entrepreneurship in economic growth has been pointed out by several researchers (Meyer, 2017). In developing countries, this is exacerbated further by the lack of formal employment. This study may provide guidance to understanding entrepreneurial intentions and the impact that perceived environmental factors have on the relationship between entrepreneurial intention and its antecedents. Johannesburg is the largest metropolitan in South Africa. Johannesburg South is characterised with high levels of youth unemployment. Research in emerging markets has been on the increase (Peng, Wang, and Jiang 2008). In South

Africa, the majority of entrepreneurial activity is concentrated in the informal sector (Venter and Urban 2015). Of particular significance to developing countries is understanding where entrepreneurs originate from and what drives their success. Recently, there has been a call to both researchers and practitioners that conclusions from a specific context are not directly transferable to another emerging market context (Nielsen, Hannibal, and Larsen 2018).

The findings of this study may provide guidance and support to government on their role in entrepreneurship and the perceptions thereof as well as create socio-economic value for entrepreneurs and entrepreneurial hubs who work with young entrepreneurs. The findings of this study may further be of benefit to the Department Of Education in understanding what could be done to bolster the current schooling curriculum in order to promote entrepreneurship and a form of employment versus traditionally corporate employment.

1.6 Delimitations of the study

- The study only focused on high school learners from Johannesburg South.
- These learners are from the same region (i.e. Southern suburbs) and share similar thoughts.
- The empirical analysis in this study was based on survey data that was gather using a survey questionnaire.
- Rural areas were not considered

1.7 Contribution of the study

- The paper contributes towards knowledge and theory by adding to the empirical literature which assesses the relationship between entrepreneurial intention and its antecedents as well as to cognitive theory literature. It adds to the literature in an underdeveloped non-Western country
- The study makes a contribution to practice helping students, entrepreneurs and policymakers who need to make consideration of the impacts that the eco-system / environment has on impeding or facilitating the relationship between perceived desirability and entrepreneurial intention.

- The study contributes to policy by way of potentially better informing education policy and the content and subjects that learners are taught in high school.

1.8 Conceptual/theoretical definition of terms

- Intention is defined as a person's readiness to perform a given behaviour (Ajzen, 2011). This intent may be seen as an immediate determinant of planned behavior (Schwarz et al., 2009).
- Perceived desirability refers to how eye-catching an individual finds the idea of becoming an entrepreneur (Shapero & Sokol, 1982). This attractiveness is both intra-personal and extra-personal (Krueger, 1993). Perceived desirability is a 'global' measure of attitude towards entrepreneurship (Esfandiar et al., 2019).
- Perceived feasibility refers to an individuals' perception of their ability to undertake a particular behaviour, successfully (Boyd & Vozikis, 1994).
- Environmental factors, in this research, refers to the governmental / regulatory environment, being the regulatory factors which exert control over entrepreneurial processes and outcomes (Seelos et al., 2011).
- High school learners refer to learners between grade 8 and 12, who are between 13 and 18 years of age.

1.9 Assumptions

The main data collection tool used was in the form of a questionnaire which was distributed to high school learners in Johannesburg South. Accordingly, the following assumptions were made with regard to the study:

- Respondents are able to understand and answer all questions.
- Respondents would share the relevant data for the purposes of this research.
- Respondents will reflect normal perspectives and experiences.
- Parents / guardians of the respondents would provide consent for the respondents to partake in the research.

- The high school learners that responded represented the views and opinions of high school learners in Johannesburg South.

2. LITERATURE REVIEW

2.1. Introduction

This literature review sets out the theoretical framework of this study. The theory of planned behavior and its use and application in measuring entrepreneurial intention and in turn predicting entrepreneurial behavior is introduced. Extant literature and research on this model is then analysed. The entrepreneurial event model is then introduced and perceived desirability and its relationship to entrepreneurial behavior is further unpacked and scrutinized. The dependent variable, entrepreneurial intention, is then discussed followed by the two independent variables: perceived desirability and perceived feasibility. The exposition then turns to International literature around environmental factors, culture and entrepreneurial intentioned and finally the South African context and entrepreneurial push and pull factors within this geographical location are set out.

2.2. Theory of Planned Behaviour

Ajzen's (1991) TPB focuses on predicting the intention of an individual to engage in a behaviour at a specific time and place. The theory suggests that individual (in this study high school students) behaviour is triggered by behavioural intentions such as attitudes towards the behaviour, subjective norms and perceived behavioural control (Entrialgo & Iglesias, 2016). Behaviour intention can be viewed as a measure for behaviour. It signifies an individual's motivation in the sense of the conscious plan or decision to exhibit a certain behaviour. The theory posits that the stronger the intention is, the higher the likeliness of the individual to perform the behaviour (Fitzsimmons & Douglas, 2011). The attitude towards behaviour describes the level to which an individual has positive and negative feelings of the outcomes of performing the behaviour. Almobaireek and Manolova (2012) posits that a favourable attitude toward a behaviour, such as starting a business, is formed when it is perceived as having advantageous and desirable consequences. They went further to state that an attitude toward entrepreneurship has shown a consistent and strong impact on entrepreneurial intention in most

of the research in various cultural settings. Fitzsimmons and Douglas (2011) cited that subjective norms refer to the belief about whether the significant others think he/she will perform the behaviour. However, it has been found that attitude could not predict entrepreneurial intention in a collectivist context, perhaps due to cultural differences (Siu & Lo, 2011).

Subjective norms describe the individuals' perceptions about how significant others in their lives think about them taking part in a certain behaviour, for instance starting a business. According to Almobaireek and Manolova (2012) subjective norms is the weakest forecaster of entrepreneurial intention among individuals. It is observed from other previous studies that in some studies that subjective norms to some extend it has a positive impact in influencing entrepreneurial intention (Iakovleva, Kolvereid & Stephan, 2011; Kautonen, Van Gelderen & Tornikoski, 2013).

Perceived behavioural control refers to people's perception of how easy or difficult a behaviour such as starting a business is, and how much control they have over starting the business (Ajzen, 1991). Self-efficacy and perceived feasibility are perceived behavioural control constructs which are close and similar to each other (Kautonen, Van Gelderen & Tornikoski, 2013). Almobaireek and Manolova (2012) has a divergent view he argues that there are some differences between perceived behavioural control and self-efficacy. He went on to state that perceived behavioural control doesn't not only focus on the feeling of being capable but also the perception of controllability of the behaviour. It has been confirmed that perceived behavioural control in relation to feasibility and self-efficacy has a stronger influence on entrepreneurial intention (Moriano et al., 2012).

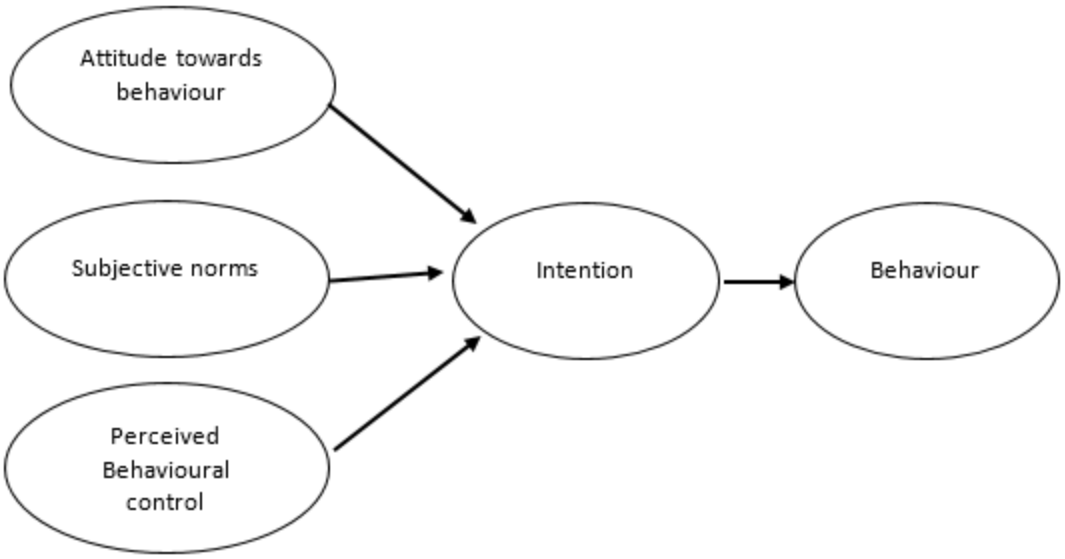

FIGURE 1: THEORY OF PLANNED BEHAVIOR [SOURCE: AJZEN, 1991]

However, as compared to other models that explains entrepreneurship intention such as the Entrepreneurial event model and the entrepreneurial potential model, explaining and forecasting an individual's behaviour is the main aim for the development of the TPB. According to Linan and Fayolle (2015) the theory of planned behaviour is viewed as more significant than other entrepreneurial intention models. The theory offers a detailed framework that gives an overall understanding and prediction of entrepreneurial intention (Fayolle, Linan & Moriano, 2014).

Carsrud and Brannback (2011) highlighted that entrepreneurial intention plays a significant role in successive entrepreneurial behaviour. Thus, an understanding of the driving force of entrepreneurial intention within an individual's mind set is essential (Krueger & Day, 2010). According to Krueger (1993, p. 53), "the construct of intentions appears to be deeply fundamental to human decision making". It can safely be concluded that entrepreneurship is, consequently, a planned process and behaviour by an individual. Accordingly, Iakovleva, Kolvereid & Stephan (2011) posits planning is the first step in this process of starting a new business.

A review of past studies shows that intention is the best predictor of voluntary behaviours such as to start a business. Thus, entrepreneurial intention is regarded as an important and direct forecaster of entrepreneurial behaviour among individuals (Krueger, Reilly & Carsrud, 2000).

Krueger and Day (2010) were of the view that since entrepreneurial intention is a predictor of entrepreneurial behaviour it is important to understand, promote entrepreneurship and entrepreneurial cognition. Accordingly, Fayolle and Linan (2014) took the lead in coming up with areas of research directions and new perspectives on entrepreneurial intention. They suggest that entrepreneurial decision-making processes may be better understood if entrepreneurial intention models are integrated with other theories and/or with methodological improvements such as mediation effects.

According Ajzen (1991) the Theory of Planned Behaviour, entrepreneurial intention is influenced through attitudinal factors that comprise beliefs about an outcome. The theory of planned behaviour has the shortcoming that it does not explicitly indicate the reasons why entrepreneurial behaviour is practised (Siu & Lo, 2011). This is could be as result that the theory does not differentiate between beliefs about outcomes that individuals choose to practise out of wish and true self, and beliefs about outcomes that people are compelled to accomplish out of obligation (Almobaireek & Manolova, 2012). Although there are many researchers who have conducted studies on entrepreneurial intention among university students linking the studies to the theory of planned behaviour none of them has clearly shown whether people choose to pursue entrepreneurial activity because they are intrinsically or extrinsically motivated (Almobaireek & Manolova, 2012; Kautonen, Van Gelderen & Tornikoski, 2013; Moriano et al., 2012; Siu & Lo, 2011).

In yet another study by Solesvik et al., (2012) in three universities in Ukraine among 3rd, 4th and 5th year students who participated in entrepreneurship courses during their second year of studies it was understood that students with high attitude towards self-employment are more likely to demonstrate increased intention for developing entrepreneurial activities. Moreover, a direct and significant relationship between subjective norm and entrepreneurial intention has been observed by Tkachev and Kolvereid (1999) who surveyed Russian students from one medical and two technical universities in St. However, Li, Wu & Wu's (2008) study failed to associate subjective norm with entrepreneurial intention in a sample of Chinese students in Shanghai.

Additionally, the results of Solesvik et al., (2012) suggested that subjective norm does not impact significantly the entrepreneurial intention of students. Correspondingly, results presented in a study by Linan and Chen (2006), where they collected data from students from Spain and Taiwan showed that subjective norm does not play a direct role in determining entrepreneurial intention. However according to a study conducted by Solesvik et al., (2012) it was observed that students with high perceived behavioural control are more likely to report strong entrepreneurial intention.

Joensuu et al., (2013) conducted a study to investigate the relationship with entrepreneurial teachings, education and the antecedents of entrepreneurship intention using the theory of planned behaviour among university students. The data for their study was collected in two stages in 2008 and 2010 to allow for comparisons to be made on the completed the self-report and to measure the effect entrepreneurial education had on entrepreneurial intention (Joensuu et al., 2013). Attitudes towards work, subjective norms, perceived behavioural control and entrepreneurial intention, were measured using Likert-scale questions. The main findings suggest that the theory of planned behaviour model was adequate in measuring entrepreneurship intention, and that entrepreneurship education pedagogy had a significant and positive relationship with attitudes toward entrepreneurship.

In a similar vein, Karimi et al., (2013) also used the theory of planned as a framework and substituted investigating the relationship of entrepreneurial education pedagogy with the antecedents, role models were rather considered among 400 university students. Likert scale measurement instrument was used to measure attitudes toward work with five items, while subjective norm, perceived behavioural control and entrepreneurship intention were each measured with six items. Students were asked if anyone in their personal networks were successful entrepreneurs (Karimi et al., 2013). The study model exposed substantial findings and the antecedents predicted entrepreneurship intention. Role models were positively related to each antecedent too, and therefore, it was determined that role models do in fact indirectly predict entrepreneurship intention (Karimi et al., 2013). A review of the literature shows that the model has been a consistent predictor of entrepreneurship intention.

2.3.The Entrepreneurial Event Model

The entrepreneurial event model was pioneered by Shapero & Sokol (1982) and the model has variables that influences entrepreneurial intentions. The model posits that desirability, feasibility and a propensity to act are the key factors prompting an individual's intention to start a new venture. To add, desirability and perceived self-efficacy are depicted as indispensable basics for the sensitivity of desirability and feasibility respectively for entrepreneurial intention (Babu, Krishan & Swathi, 2013). The theory is grounded on one dependent variable, (entrepreneurial intention) and three independent variables that corresponds to the individual attitudes of the respondents; these variables include; perceived desirability; perceived feasibility and propensity to act (Charles & Gherman, 2013).

The entrepreneurial event model (EEM) is used mainly to determine entrepreneurial intention rather than predict any intention. According to Shapero & Sokol (1982) the EEM assumes that two fundamentals should be achieved prior starting a new venture. The first assumption states that an entrepreneur must recognise the thought of starting a business as sound, that is, he or she finds this idea as both attractive and achievable. However, the second assumption states that the actual creation of a new business is initiated by some type of displacing event. This could take the form of neutral, negative or positive experiences. Neutral events may take the form of completing a tertiary qualification, whereas a negative event may include job loss or getting a divorce (Douglas & Fitzsimmons, 2013).

Positive events may consist of receiving a legacy or start-up cash from a significant other (Krueger, Reilly & Carsrud, 2000). It is worth noting that the movement experienced will bring about a change in behaviour, and if the individual views the idea of starting a venture as sound, he or she will act upon this feeling. This could be referred to as the entrepreneurial event, where perceived feasibility, perceived desirability and propensity to act influence the intention and in turn the behaviour of an individual to start a business (Shapero & Sokol, 1982). Shapero (1984) explains that the fundamental mechanisms of the entrepreneurial event model are more complex than they appear. In some cases, only perceived feasibility and perceived desirability will be a sufficient suggestion of entrepreneurial intention, whereas other cases may account for

variance explained by all three independent variables. Another noteworthy aspect of this model is the multifaceted nature of propensity to act (Zimmerman & Chu, 2013). This predictor not only has a direct effect in determining entrepreneurship intention, but also has moderating effects between the other variables within the entrepreneurship event model. Perceived feasibility and perceived desirability are also shaped by situational variables, social factors, individual characteristics and the cultural environment (Shapero & Sokol, 1982). Thus, the sufficiency of the model will fluctuate according to the environment and situation where it is applied. The variables of the entrepreneurship event model will be discussed below.

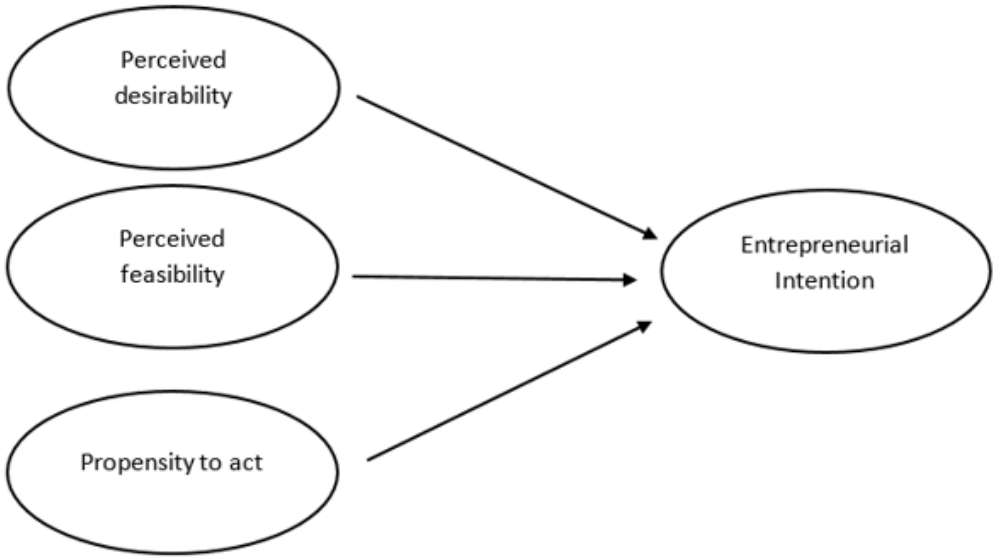

FIGURE 2: THE ENTREPRENEURIAL EVENT MODEL [SOURCE: SHAPERO & SOKOL, 1982]

According to Krueger & Day (2010), perceived desirability has been noted to play a significant role in influencing entrepreneurial intention. This insight is fostered through the attitudes and beliefs of an entrepreneur beginning a new venture (Krueger & Day, 2010). These attitudes and thoughts can be fostered through numerous variables, for instance, entrepreneurship training has been noted to inspire an encouraging attitude towards engaging in entrepreneurship (Douglas & Fitzsimmons, 2013). A review of literature reveals that role models and successful business individuals could also increase the attractiveness of entrepreneurship if these individuals motivate others through knowledge and the sharing of their good experiences (Fayolle, Linan & Moriano, 2014).

An individual perceives entrepreneurship as a desired career choice if the individual has positive attitudes towards entrepreneurship and has favourable beliefs around entrepreneurship. According to Shapero and Sokol (1982) high levels of perceived desirability are linked with greater levels of entrepreneurial intention. Fayolle, Linan & Moriano (2014) described perceived feasibility has one of the important determinants of entrepreneurial intention. An important aspect that forms this insight is the assessment of an individual with regards to whether they possess the ability and competences essential to start a new venture (Krueger, 1993). Godsey and Sebora (2010) clarify that an individual's level of perceived feasibility is positively influenced by their entrepreneurial self-efficacy.

Entrepreneurial self-efficacy is distinguished by the person's appraisal of their aptitude, and how effectively they can use available resources in the process of starting a business (Godsey & Sebora, 2010). The concept of self-efficacy is that individuals typically evade tasks, or behaviours, that they deterine to be out of their capability or skill set. Nevertheless, when this behaviour is shaped via external factors, it may result in positive outcomes (Babu, Krishan & Swathi, 2013). For instance, entrepreneurship training may allow individuals to learn the expertise necessary to start a venture. Accordingly, when an individual possesses information on running a business and understands entrepreneurship, this may intensify entrepreneurial self-efficacy, and in turn, alter their perceptions. Individuals who hold the required skills often perceive that new venture creation is a practicable and achievable event (Godsey & Sebora, 2010). Therefore, individuals who perceive new venture creation as feasible are more likely to exhibit high levels of entrepreneurship intention.

Propensity to act was essentially recognised as a crucial element, even before the perceptions of feasibility and desirability were contemplated in the entrepreneurship event model (Shapero & Sokol, 1982). Shapero & Sokol (1982) links this factor to internal locus of control, even proposing using an internal locus of control scale as a substitution in the absence of suitable measures. According to Zimmerman & Chu (2013) the internal locus of control refers to the individual's perception of their ability to influence the events within their lives. Individuals who possess an internal locus of control believe that they in charge of their own lives, as opposed to individuals who have an external locus of control. Individuals who fall into the latter category tend to

attribute events within their lives to external factors (Begley & Boyd, 1987). The type of control governs whether an individual has the ability within themselves to execute a plan of action autonomously (Gurel, Altinay & Daniele, 2010). Therefore, an individual who does not have a sufficient level of propensity to act, cannot be an entrepreneur, as they will not be able to initiate new venture creation (Shapero & Sokol, 1982). This concept has varied through research, which has also resulted in measurement inaccuracies and errors of the variable.

According to Shapero & Sokol (1982) propensity to act is also viewed as the most complex predictor within the model. Shapero & Sokol (1982) contend that propensity to act not only has a direct effect on entrepreneurial intention, but also acts as a moderating variable between the other variables and entrepreneurial intention. This accentuates the significance of propensity to act within this model. For instance, when propensity to act is low, an individual's perception towards entrepreneurship may be less positive (Krueger, 1993). Perceived desirability, perceived feasibility and propensity to act have been found to associate with one another and are used together in the entrepreneurship event model to predict entrepreneurial intention (Schlaegel & Koenig, 2014).

A review of literature from past studies on entrepreneurship event model and entrepreneurial intention have revealed that the antecedents of the model are significant predictors of entrepreneurship intention. It has been observed that even if the model is used within diverse cultural contexts, it will remain adequate in predicting entrepreneurial intention (Byabashaija & Katono, 2011; Garg, Matshediso & Garg, 2011; Godsey & Sebora, 2010). Byabashija and Katono (2011) undertook a study to investigate the magnitude of perceived desirability, perceived feasibility and perceived self-efficacy in predicting entrepreneurship intention among college students. They adopted Krueger and Day's (2010) measuring scales in collecting data. The findings of the study revealed that both perceived desirability and perceived feasibility are significant predictors of entrepreneurial intention. Additionally, perceived feasibility was shown to be a greater predictor of entrepreneurial intention than perceived desirability. Similarly, Godsey and Sebora (2010) also conducted a study to determine the impact of perceived desirability and perceived feasibility on entrepreneurial intention. Their study comprised of

students from high schools, and the results showed that both perceived desirability ad well as perceived feasibility were substantial predictors of entrepreneurial intention too.

Frank (2007) undertook a survey that looked at the part that personality traits, resources and process factors play in new venture intentions and new venture success. New venture creation intentions can be thought of as entrepreneurial intention. Amongst the personality traits that the study looked at, was internal locus of control. The data for the study was collected from high school learners and university students in Australia. Internal locus of control was measured using a 5-point Likert scale, which looks into internal and social-external control styles. The outcomes of the study advocated that internal locus of control was a significant predictor of business start-up intentions. Research conducted by Ang and Hong (2000), yielded similar finds. This study examined whether personality traits were substantial predictors of entrepreneurial spirit. Their findings exposed internal locus of control as a significant predictor of entrepreneurial spirit amongst students from Singapore. Therefore, the antecedents of the model of entrepreneurial event model have been found significant predictors of entrepreneurial intention amongst learners. Nevertheless, different studies have provided support that these variables can also individually predict entrepreneurial intention amongst learners. Krueger, Reilly & Carsrud, (2000) jointly tested all the components of the entrepreneurial event model. The results of the study suggest that the model can be considered a satisfactory framework for predicting entrepreneurial intention.

According to Montoya & Cooper (2016) university students have high entrepreneurial intentions as they have high chances of becoming potential entrepreneurs. This could be since in universities that's where people tend to define their life project, which varies according to their personal characteristics and their social context (Hong et al., 2012). Fayolle and Gailly (2015) are of the view that entrepreneurship education is essential to have multi sectoral commitment with the participation of enterprises and industrial institutions, the financial sector, and national and regional economic development entities. Despite all the joint effort of the actors, often training in entrepreneurship by institutions of higher learning is not carried out adequately (Shinnar, Hsu and Powell, 2014). Moriano et al., (2012) explains that "there are unintentional social barriers

that are based on the lack of support to student entrepreneurs, that is, in many occasions teachers educate and treat their students as future employees and not entrepreneurs".

The studies conducted on intentions to start a new business among university students have been applied on samples of students of different academic programs and different levels of progress in their academic programs, age ranges and in general, different socio-economic contexts (Hattab, 2014; Neneh, 2014; Yosuf et al., 2014). In Latin America, researchers managed to determine the degree of dependence of the variables of internal control of the person, the need for achievement and risk, with their entrepreneurial intent and conclude that there is a significant association between the convenience and the perceived feasibility of entrepreneurship. They also found a weak association between risk tolerance and other factors related to entrepreneurial intent.

The risk factor is an element that unfavourably affects the entrepreneurial intent of an individual, specifically in areas linked to innovation. Motivation for achievement and perceived control are elements with great descriptive power in entrepreneurial behaviour. In a study by Soria et al., (2016) the presence of the risk aversion variables is considered an explicit element that binds the positive relationship between self-efficacy internal control and entrepreneurial intent among university students. Most studies have highlighted the factor of motivation for achievement as a common aspect prompting individuals to start a new business venture, in addition to other factors, and which has a high explanatory power over a person's entrepreneurial intent (Mokhtar & Zainuddin, 2011).

2.3.1 Perceived desirability as an antecedent

Perceived desirability can be defined in terms of the attractiveness that it holds for one to create a new venture (Shapero & Sokol, 1982). It is the individuals' assessment of their desirability to engage in a particular behaviour (Weerakoon & Gunatissa, 2004). According to Krueger (2010), perceived desirability has been noted to have a significant part in influencing entrepreneurial intention and this insight is fostered through the attitudes and beliefs of a person towards creating a new venture.

This study proposed the following hypothesis in respect of perceived desirability and entrepreneurial intention:

> *H1: Perceived desirability has a positive influence on entrepreneurial intention of high school learners in Johannesburg South.*

2.3.2 Perceived feasibility as an antecedent

Perceived feasibility can be defined as an individuals' perception of their ability to successfully undertake a particular behaviour (Boyd & Vozikis, 1994). Mair and Noboa (2003) defined perceived feasibility as the extent in which an individual believes in their own ability to create a new venture. Krueger (1993) suggest that perceived feasibility is related to self-efficacy, which is more related to an individual believing that they possess the necessary and required skills to achieve an outcome.

Mair and Noboa (2003) suggest that there are multiple factors which influence what an individual perceives to be feasible. This is consistent with the view of Shapero and Sokol (1982) who argue that the variations in individual behaviour are determined by the socio-cultural arena.

This study proposed the following hypothesis in respect of perceived feasibility and entrepreneurial intention:

> *H2: Perceived feasibility has a positive influence on entrepreneurial intention of high school learners in Johannesburg South.*

2.4 Entrepreneurial Intention

The theoretical framework of this this study is built on the concept of entrepreneurial intentions. Entrepreneurial intention can be seen as the intention to start a new venture (Krueger & Carsrud, 1993). Thompson (2009) notes the presence of consciously planning to start up a venture in the future in this definition. Thus, the journey of entrepreneurship or entrepreneurial activity begins with entrepreneurship (Gartner, Shaver, Gatewood & Katz, 1994).

Entrepreneurial intention can be seen as a conscious awareness or conviction by an individual to start a new business in the future (Linan, Nabi & Krueger, 2013, p. 77). Naturally, engaging in entrepreneurial behaviour would imply the existence of a preceding cognitive representation of such (Fini, Grimaldi, Marzocchi & Sobrero, 2009). Notwithstanding that inspiration is the initiator of entering into entrepreneurial activity, intention is required in order for it to be perceptible (Del Mar & Shane, 2003). The is voluntary and conscious intentionality around starting a new venture (Krueger, Reilly & Carsrud, 2000)

Intention-based models have been developed as tools to interrogate predictors for entrepreneurial activities (Krueger, Reilly & Carsrud, 2000). These models include The Davidsson Model; Entrepreneurial Potential Model (Davidsson, 1995); Krueger and Brazeal's (1994) Entrepreneurial Potential Model (EPM); and the Entrepreneurial Attitude Orientation Model (Robinson, Stimpson, Huefner & Hunt, 1991).

These aforementioned models are essentially inspired from two primary models, being the TPB and the EEM (Ram, Singh & Prasad, 2012). It is for this reason that these two models formed the foundation of this literature review around the dependent variable in this research, entrepreneurial intention.

2.5 Culture and environmental factors

2.5.1 Environmental factors

The decision of a person to participate in entrepreneurial activity, can often be affected by the quality and nature of institutions in a country (Shane, Locke & Collins, 2003). The institutional environment also has the potential to foster socio-political and cognitive legitimacy which increases a new ventures survival prospects (Manolova, Eunni & Gyoshev, 2008). North (1990) and Scott (1995) classified institutions that affect organisations and their stakeholders into three categories, namely: cognitive, normative and regulatory.

The cognitive institutional environment creates norms of conduct that shapes the context of entrepreneurial ventures, referring essentially to shared scripts and templates amongst a nation

or community (Seelos et al., 2011). This environment premises that behavior emerges because of cognitions (Karanda & Toledano, 2012). This behavior varies across contexts and cultures and are thought to be learnt through social interactions (Valdez & Richardson, 2013).

The normative environment, as a concept, measures the admiration and importance that the residents of a country place on entrepreneurial thinking. (Ferri & Urbano, 2015). The normative pillar is concerned with societal values, social norms and attractiveness (Valdez & Richardson, 2013). The norms provide stability within society and individuals are individuals within a society tend to upload and adhere to societal norms. The level of attraction and admiration that a society or country has towards entrepreneurship and engaging in entrepreneurial activity is the normative environment (Arasti et al., 2012).

Regulatory factors are those which exert control over entrepreneurial processes and outcomes (Seelos et al., 2011). The regulatory environment embodies the formal rules which incentivizes, constrains and regulates entrepreneurial behaviour (Urban, 2013). This dimension is fundamentally concerned with the creation or rewards and punishment that influences the behaviour and actions of individuals (Valdez & Richardson, 2013). For the purposes of this research, environmental factors is defined as being the governmental / regulatory factors.

2.5.2 Environmental factors and entrepreneurship

Entrepreneurial activity differs across countries, alluding to the fact that contextual factors are a source of difference (Valdez & Richardson, 2013). Ruef and Scott (1998) suggest that environmental factors are significant predictors on entrepreneurial activity. This is further supported by Busenitz, Gomez & Spencer (2000), suggesting that entrepreneurial activity is influenced by institutional profiles.

There have been findings of strong links between national culture and cognitive differences, which influences entrepreneurial activity (Mitchell et al., 2002).

The push and pull theory of entrepreneurship shares the same aspects with the push-pull-mooring model of human migration. This is to say, entrepreneurship can be conceptualised as an

individual's intention to move on, migrate from unemployment and income-based employment to self-employment (Giacomin et al., 2011). In with the push-pull-mooring model of the migration literature, the intent to engage in an entrepreneurship career path is influenced by negative factors such as dissatisfaction with a current employer, difficulty of finding employment, difficult economic conditions, social recognition or inflexible work schedule which moves individuals into self-employment (Segal, Borgia & Schoenfeld, 2005). These negative factors are regarded as the push factors ta an individuals' current state parallel to his or her origin. According to Thurik and Dejardin (2012) push effects associated with some levels of dissatisfaction with an individual current situation in life and have been found to motivate entrepreneurship behaviour. However, pull theory refers to attractions at the destination which move individuals into self-employment or entrepreneurship by seeking independence, wealth and self-fulfillment. The pull factors are those where an individual is attracted primarily by the prospect of founding a business (Ismail, 2012). Pull factors has been found to impact on entrepreneurial motivations (Giacomin et al., 2011). Variables identified in review of past studies as pull factors includes independence, profit search and market opportunity.

The most recurring area of interest in entrepreneurship is what triggers individuals to become entrepreneurs (Zimmerman & Chu, 2013). A review of literature show that they are four chief drivers of entrepreneurial motivation that motivates individuals for becoming an entrepreneur (Kirkwood, 2009). The four chief drivers are desire for independence, monetary motivation, motivation related to work such as unemployment, redundancy, a lack of job or career prospect and family related motivations. According to Robichaud, McGraw & Roger (2001) entrepreneurship motivation falls into four categories namely extrinsic rewards, independence/autonomy, intrinsic rewards and family security. Swierczek and Ha (2003) posits that small business owners in Vietnam are more inspired by challenge and achievement than the necessity for a career and economic security. Carter et al., (2003) reveal that the most popular motivating factor is the desire for an individual to achieve financial security.

In a study by Chu, Benzing & McGee (2007), it was observed that Kenyan and Ghanaian entrepreneurs, the need to increase their income and creating jobs for themselves are the main factors motivating them to become entrepreneurs. According to Benzing, Chu & Kara (2009) the

three most chief factors motivating entrepreneurs to start a business are to increase their income, to have job security and to maintain personal freedom and independence. The need for high level of achievement motivates individuals to be entrepreneurs and are consistent with the demands of entrepreneurial role (Stefanovic, Rankovic & Prokic 2011). It has been observed that the need for achievement is the most important characteristic for entrepreneurs.

Douglas and Shepherd (2002) conducted a study to determine the relationship between career choice and individuals' attitudes toward income, independence, risk, and work effort among a sample of 94 alumni of an Australian university. The study revealed that individuals with a positive attitude towards risk and independence demonstrate a strong intention to be self-employed whereas the desire to be rich is not a significant predictor of entrepreneurship intention. In a similar vein, Segal, Borgia & Schoenfeld (2005) undertook a study to investigate the factors that motivate undergraduate business students from a Florida University, and it was found out that tolerance for risk, perceived feasibility, and net desirability to significantly influence entrepreneurial intentions. Ozaralli and Rivenburgh (2016) comparing the antecedents of entrepreneurship intention among 589 Junior and Senior US and Turkey students, found that both U.S and Turkey students demonstrate a low level of entrepreneurship intention. U.S students were found to be risk averse towards entrepreneurship while Turkish students find economic and political conditions to be unfavourable for start-ups. In addition, they find a statistically significant relationship between the personality attributes of optimism, innovativeness, risk-taking propensity and entrepreneurial intention.

Krishna (2013) classified the motivational factors as internal and external factors. They went on to classify internal motivation factors as factors related to the personality of the individual and generate an inclination to adopt entrepreneurial activity. They include factors such as educational background, work-related experience, the desire to do something new and innovative, the longing to be free and independent and family background. The entrepreneurial behaviour (intention) cannot be fulfilled without an environment that supports entrepreneurship. According to Kirkwood (2009) external factors offer support and give a trigger the intentions to take part in entrepreneurship and they consist of assistance from government and financial assistance from institutions.

Charles and Gherman (2013) described entrepreneurship motivational factors as push and pull factors. The factors that push individuals to start a new venture are called push factors we as pull factors are referred to as those factors that pull people towards entrepreneurship. Push factors are characterised by personal or external factors. This category includes issues such as unemployment, redundancy, and a lack of job or career prospects. Pull factors are those that draw people to start businesses and it encompasses the individuals' opportunity identification. Kirkwood (2009) identified the desire for independence and monetary motivation especially wealth creation as pull factors. Additionally, motivations which are related to work as well as family-related that trigger one to become an entrepreneur are classified as push factors (Islam 2012). According to Islam (2012) motivators that are characterised by personal or external factors are considered as push factors and they include the need to support the family with additional income, difficulty in finding work, divorces, economic recession and job losses. Pull factors are those motivators related to opportunity and superior needs. These include independence, personal growth, self-fulfillment, social status, financial motivation and power.

The high unemployment rate among the youths in South Africa and the low pace of economic growth have attracted the attention of scholars and policy makers towards developing policies that will foster the spirit of entrepreneurship and facilitate new business creation especially among youths (Giacomin et al., 2011). This could be because of the contributions of entrepreneurship in job creation and economic growth. Thus, it is of paramount importance to understand the motivation for entrepreneurial behaviour. Entrepreneurial behaviour is motivated by intentions to conduct such behaviour (Krueger, Reilly & Carsrud, 2000). According to Ajzen (2002) intentions are the best predictor of behaviour. The push and pull factors of entrepreneurship and intentions have been understudied.

According to Botha (2006), push and pull factors can be compared to necessity-based entrepreneurs and opportunity-based entrepreneurs. Individuals who are influenced by pull factors to start a business are called opportunity entrepreneurs. In view of youth entrepreneurs, researches investigating the push and pull factors revealed that youth entrepreneurs were motivated by both push and pull factors to start a business. The desire for independence is one push factor and profit objective and social status were the pull factors motivating youth to start

a new venture whereas old unemployed people are guided solely by the lack of an employment (Charles & Gherman, 2013). It has also been noted that unemployed young people start a business as a hobby to keep them busy. Fatoki and Patswawairi (2012) undertook a study to investigate the factors that motivate or hamper immigrant-entrepreneurs from other African countries to engage in entrepreneurship in South Africa. The findings of the study revealed that immigrant entrepreneurs were driven into entrepreneurship by both push and pull factors with unemployment being the most important push factor. The authors add that the obstacles to the performance of immigrant-owned businesses include finance, weak markets, human capital and lack of support.

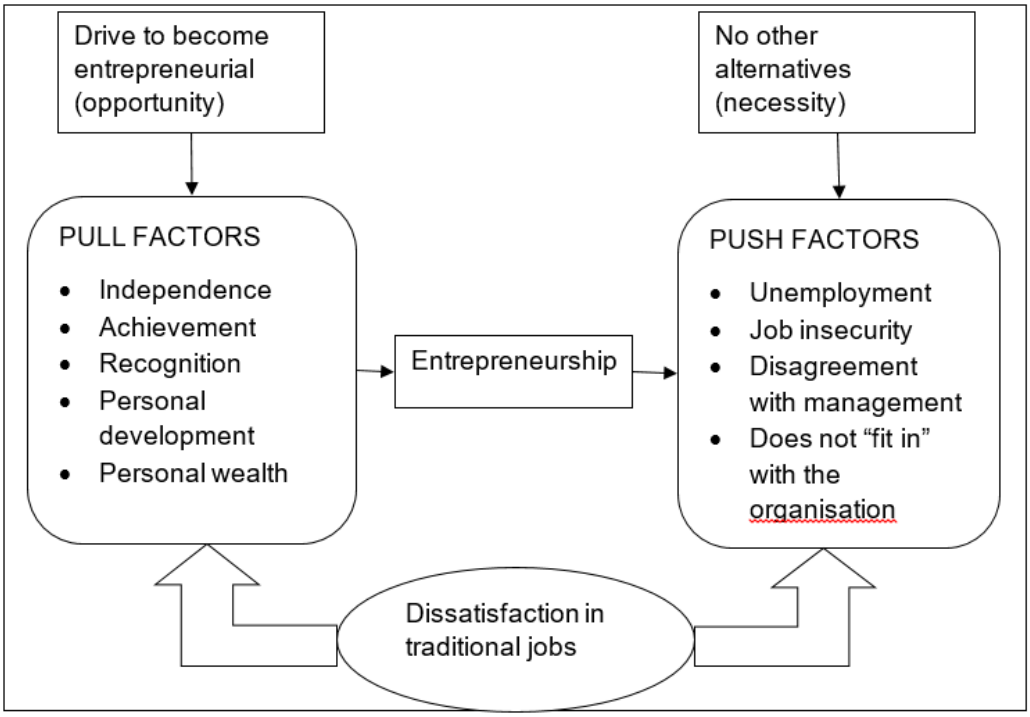

FIGURE 3: THE PUSH AND PULL FACTORS OF ENTREPRENEURSHIP [SOURCE: NIEMAN ET AL., 2003]

When figure 3 is contemplated upon, it becomes clear that, the pull factors imply the factors which encourage students to have an independent occupation (Botha, 2006), include:

- independence; most young (individuals) entrepreneurs want to be their own boss;

- recognition; Most young (individuals) entrepreneurs are motivated by the need to achieve social standing attained by entrepreneurs;
- achievement; A feeling of acknowledgement gained from managing one's own venture;
- personal development; most young (individuals) entrepreneurs desire the freedom to pursue personal development; and
- personal wealth; the financial rewards attained at the end of the entrepreneurial process motivate young (individuals) people to start a venture.

Push factors are those which force young (individuals) to engage in entrepreneurship to get over difficulties, which are mainly financial difficulties (Botha, 2006), and include;

- unemployment; most young individuals fail to acquire formal jobs and they end up being forced to engage in entrepreneurial activities;
- job insecurity; lack of job security at a work place can motivate one to start a venture;
- disagreements with the organisation; an employee who is faced with career limitations and setbacks in a conventional job can decide to become an entrepreneur and not fitting in with the organisation or the inability to pursue personal innovation in a convectional job can force one into entrepreneurship.

South Africa's cognitive environment is characterised by a lack of resources, skills and business knowledge (Littlewood & Holt, 2015; Urban, 2013). The normative and cognitive environment in South Africa are strongly informed by legacy and sustainable development challenges (Littlewood & Holt, 2015).

Findings from Valdez and Richardson (2013) suggest that individuals are less likely to engage in necessity entrepreneurship when the regulatory environment supports entrepreneurship. This type of entrepreneurship depicts individuals engaging in entrepreneurship as a means of survival that is not necessarily "productive" to the economy (Bosma & Levie, 2009). South Africa exhibits high levels of necessity entrepreneurship and in order to shift from this to productive / opportunity entrepreneurship and stimulate economic development, macro-level institutions as well as policies that encourage entrepreneurial behaviour needs to be focused on.

This study builds on investigating how perceptions of environmental factors (specifically the regulatory institution), influences the relationship between entrepreneurial intention and its antecedents. The following hypotheses were proposed in this regard:

H3: Positive perception of the regulatory environment has a positive effect on the relationship between perceived desirability and entrepreneurial intention of high school learners in Johannesburg South.

H4: Positive perception of the regulatory environment has a positive effect on the relationship between perceived feasibility and entrepreneurial intention of high school learners in Johannesburg South.

2.6 Hypotheses Development

The theoretical basis of this study is based on the notion of entrepreneurial intentions. This is essentially one's intention to start a new venture and engage in entrepreneurial activity (Krueger & Caesrud, 1993). It can be further noted that the end result of engaging in entrepreneurial activity begins with intention (Gartner, Shaver, Gatewood & Katz, 1994). Notwithstanding the reality that there are several models and variations of models to explain this phenomenon, the two most widely acknowledged and tested are the EEM and TPB (Shook, Priem & McGee 2003). Based on numerous studies and investigations displaying the positive relationship between entrepreneurial intentions and its antecedents, the hypothesis is formed that perceived desirability has a positive influence on entrepreneurial intention of high school learners in Johannesburg South (H1) and that perceived feasibility has a positive influence on entrepreneurial intention of high school learners in Johannesburg South (H2).

The regulatory or perceived regulatory environment in an area may have an impact of entrepreneurial intentions and its antecedents. International evidence suggest that the regulatory environment has a material influence on entrepreneurial intention (Herrington et al., 2010). Recognising the context of the regulatory environment and given the definition of the regulatory environment which refers to the formally codified and enforced structure of laws in a society (Busenitz, Gomez & Spencer, 2000), hypothesis three and four are formed stating that

positive perception of the regulatory environment has a positive effect on the relationship between perceived desirability and entrepreneurial intention of high school learners in Johannesburg South (H3) and positive perception of the regulatory environment has a positive effect on the relationship between perceived feasibility and entrepreneurial intention of high school learners in Johannesburg South.

2.6.1 Hypothesis 1

("H1"): Perceived desirability has a positive influence on entrepreneurial intention of high school learners in Johannesburg South.

2.6.2 Hypothesis 2

("H2"): Perceived feasibility has a positive influence on entrepreneurial intention of high school learners in Johannesburg South.

2.6.3 Hypothesis 3

("H3"): Positive perception of the regulatory environment has a positive effect on the relationship between perceived desirability and entrepreneurial intention of high school learners in Johannesburg South.

2.6.4 Hypothesis 4

("H4"): Positive perception of the regulatory environment has a positive effect on the relationship between perceived feasibility and entrepreneurial intention of high school learners in Johannesburg South.

2.7 Conclusion of Literature Review

The literature review began with reviewing the established body of research around entrepreneurial intention. Investigation into the literature finds strong support amongst existing models of intention. Two widely recognised and accepted models are the TPB (Ajzen, 1991) and the EEM by Shapero & Sokol (1982) which are then discussed. The review expands particularly on the affiliation between perceived desirability and perceived feasibility and their interactions with entrepreneurial intention respectively. The literature review then goes on to discuss environmental factors, being normative, cognitive and regulatory. The review then zooms into regulatory environment, looking initially at the international literature and thereafter at the South African context. Finally, hypotheses are developed around the literature and duly stated.

The following are the hypotheses stated:

Hypothesis 1: Perceived desirability has a positive influence on entrepreneurial intention of high school learners in Johannesburg South.

Hypothesis 2: Perceived feasibility has a positive influence on entrepreneurial intention of high school learners in Johannesburg South.

Hypothesis 3: Positive perception of the regulatory environment has a positive effect on the relationship between perceived desirability and entrepreneurial intention of high school learners in Johannesburg South.

Hypothesis 4: Positive perception of the regulatory environment has a positive effect on the relationship between perceived feasibility and entrepreneurial intention of high school learners in Johannesburg South.

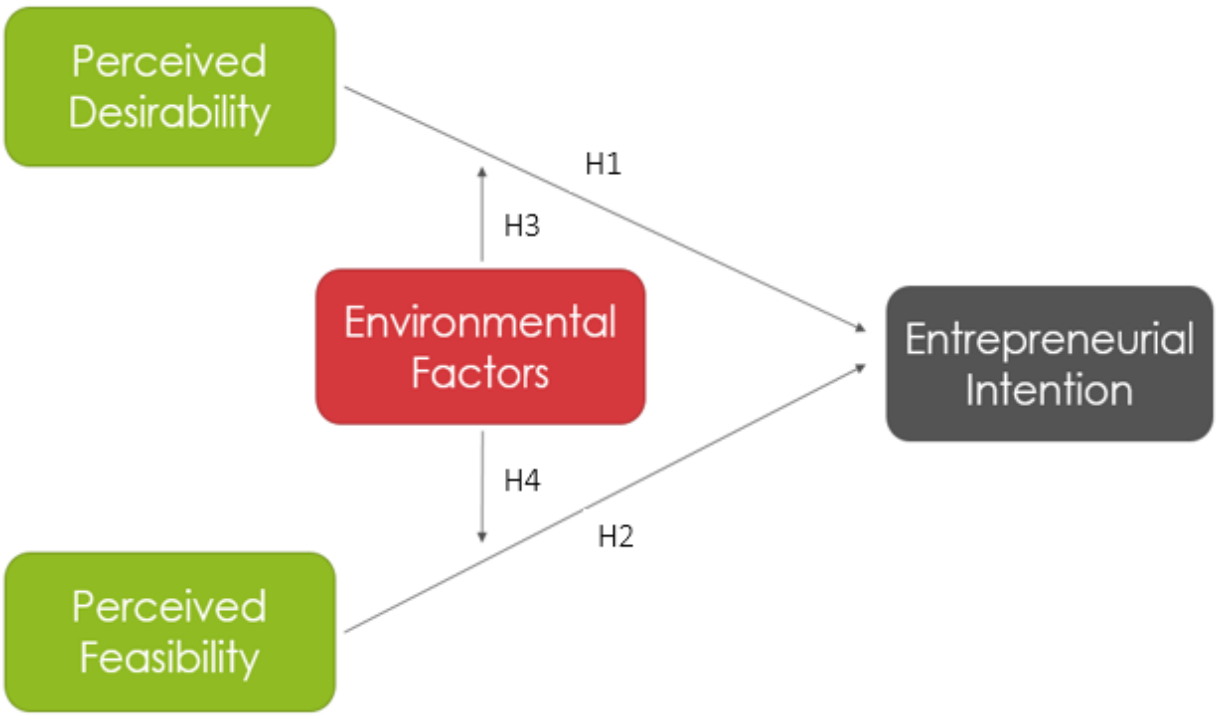

FIGURE 4: CONCEPTUAL MODEL [SOURCE: THEORY OF PLANNED BEHAVIOUR (AJZEN, 1991); ENTREPRENEURIAL EVENT MODEL (SHAPERO & SOKOL, 1982)]

3. RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, the methodology that was adopted in this research is discussed. The research approach, design, population and sampling method is discussed. The research instrument, and the validity and reliability of the instrument together with the data collection methods is further discussed. Finally, limitations of the study and ethics around data collection are noted.

3.2 Research approach / paradigm

The epistemology of this research is located in post-positivism. In line with this paradigmatic location of post-positivism is the belief that knowledge can be tested and disproven, but never conclusively verified. This is to say that the whole truth if never attainable but one get closer to it through research (Lincoln, Lynham, & Guba, 2011).

The ontological orientation of this study is objectivism. The objective or realist standpoint suggests that there is one world and that the researcher will view observations independently and without subjectivity (Cooper, Schindler, & Sun, 2006).

3.3 Research Design

The methodological approach that was adopted was a cross-sectional, and more specifically, a quantitative cross-sectional study. Data was collected through primary data collection. This entailed administering surveys (research instrument) to collect data at a point in time to statistically analyse and to detect patterns. The gathering of data and analysis could be done relatively quickly unlike a longitudinal study which requires gathering data at different points in time. Due to time constraints, the author opted for this research design method.

3.4 Population and sample

3.4.1 Population

A population can be defined as any complete set of entities that share some set of characteristics (Zikmund & Babin, 2006, p. 369). The population for this research paper was high school learners in Johannesburg South, South Africa. This constituted homogenous students with similar school curriculums and subjects whom resided in the Johannesburg South region. In order to realise the homogeneity of students in this group, only learners attending private school were used. The population for this study was high school learners who attended private school.

3.4.2 Sample and sampling method

Sampling involves how you select data out of your population for analysis (Cooper, Schindler & Sun, 2006). The sampling type that was used in this paper was be non-probability sampling. As a complete list of all high school students in the country was not readily available, convenience sampling was used. There are various equations that could be used to determine a minimum sample size (Kotrlik & Higgins, 2001). Due to the high level of homogeneity within the population of high school learners, a larger sample need not necessarily be required as would be required in heterogeneous populations. In order to test the entrepreneurial intentions and perceptions of the regulatory environment from a homogenous group, homogeneity was characterized as students of similar age, residing in the Johannesburg South region, following the same curriculum and pursing similar subjects. Due to the fact that this paper considered a regression analysis, a sample size of 104 + k was considered to constitute a minimum sample. This was calculated to be 104 + (7 x 6) = 146. The paper considered 200 samples to ensure flexibility with statistical tests.

Convenience sampling was used in this research due to its convenience and cost-effectiveness. This method is fast and simple and having taken consideration of the possible challenges, time constraints and capacity to handle and interpret the responses timeously, this method was selected. Johannesburg South was conveniently selected as the region to collect data from. A

private school was approached in Johannesburg South, Lenasia. Permission was acquired from the school and head master to approach the learners. Learners were then presented with the survey and consent forms for their parents / guardians.

Learners that were surveyed consisted of learners between grade 8 and 12 and were between 13 and 18 years of age. Learners helped in recruiting other participants from private schools in Johannesburg South. This method is referred to as snowballing which is a non-probability convenience sampling method where one subject gives the researcher the name of another subject who in turn provides the name of another subject, and so on (Baltar & Brunet, 2012). This was done until the required sample size was met.

TABLE 1: PROFILE OF RESPONDENTS

Description of respondent type	**Number to be sampled**
High school student in private schools from across Johannesburg South	200

[Source: *Author's own*]

In total, 119 fully completed surveys were received which was sufficient to conduct the statistical analysis required for this research.

3.5 The research instrument

The research instrument used was a self-administered paper-based survey. The constructs of perceived desirability, entrepreneurial intention and the various environmental factors were operationalised through variables that will be measured with seven-point and five-point Likert scale items respectively. Existing scales and instruments were identified and scrutinised for suitability or adaptability. Scales for perceived desirability (Drnovsek & Erikson, 2005) and entrepreneurial intention (Liñán & Chen, 2009), environmental factors (Indarti & Langenberg, 2004) were identified. The scales were treated as ordinal data and not as interval-level responses.

The first section of the instrument gathered data on the independent variable, perceived desirability. This consisted of three items on a seven-point Likert scale, with one being positive and seven being negative, with item two being reverse scored.

The second section of the instrument gathered data on the independent variable, perceived feasibility. This was done on a seven-point Likert scale where one was positive and seven was negative, with items one and three being reverse scored.

Section three of the instrument gathered data on the dependent variable, entrepreneurial intention. This was done on a seven-point Likert scale where one was negative and seven was positive.

The fourth and final section of the research instrument gathered data on the perceived regulatory environment on a five-point Likert scale, where one is negative and five is positive. There were six items in this section where the first three represented government support and the latter three items represented infrastructure.

The first three questions of the survey were for the independent variable, perceived desirability. Question two from the Likert scale responses was reverse scored. Questions four to eight were for the independent variable, perceived feasibility. Questions four and six were reverse scored. Questions nine to fourteen related to the dependent variable, entrepreneurial intention on a seven point Likert-scale. Questions fifteen to twenty gathered data for the regulatory environment on a five-point Likert scale.

The scales used in this study have yielded Cronbach Alpha scores in previous studies as follows:

TABLE 2: INSTRUMENT SCALES AND CRONBACH ALPHA SCORES

Variable	**Source**	**Scale (Likert)**	**Items**	**Cronbach Alpha scores**
Perceived Desirability 7-point Likert scale	(Peterman & Kennedy, 2003; Krueger, 1993)	7-point	3	(α = .66 ; α = 0.69)
Perceived Feasibility 7-point Likert scale	(Peterman & Kennedy, 2003; Krueger, 1993)	7-point	5	(α = .77 ; α = 0.71)
Entrepreneurial Intention 7-point Likert scale	(Liñán, 2008)	7-point	6	(α = .891)
Environmental Context 5-point Likert scale	(Indarti & Langenberg, 2004)	5-point	6	(α = .81)

[Source: *Author's own*]

The research instrument is attached in Appendix D.

3.6 Procedure for data collection

Data was collected through administering a paper-based, self-administered survey questionnaire through primary data collection. Gatekeepers to this research included the school principal / head master and parents / guardians of the students. Once the principal / head master of the school granted permission for the administration of the survey to the high school learners, the research began through one teacher at the school. Learners were then recruited to participate in the study and more and more students were recruited across the Johannesburg South region through snowballing where the learner would receive the questionnaire and consent form. If the parent / guardian approved, and the learner was willing to complete the study, the survey was completed and data was gathered. Surveys that were not returned would indicate that the learner did not acquire parental consent or the learner was unwilling to participate in the study. The cover letter of the survey clearly stated that parents / guardians permission was required, by signature, before the student may commence with the survey. Participation in the survey was completely voluntary and not compulsory. Research Ethics are discussed later in this chapter.

3.7 Data analysis

3.7.1 Statistical Package

Descriptive statistics and was analysed using SPSS while multiple regression with moderation was conducted using SAS.

3.7.2 Descriptive Statistics

Descriptive statistics such as the mean, standard deviation and frequencies were used to summarise data. Frequencies were mainly used for categorical variables while means and standard deviations were used for metric variables and tata measured on a Likert scale.

3.7.3 Factor Analysis

Exploratory factor analysis (EFA) was carried out to assess the validity on constructs. Validity refers to the extent to which a scale or set of measures accurately represents the concept of interest. The convergent validity which is shown by factor loadings provided in factor analysis output refers to the amount of weight assigned to the factor. Here we are interested in significant factor loadings. Factor loadings less than 0.4 were considered to be insignificant and hence removed from the model. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) was used to assess the adequacy of the sample to run factor analysis. A KMO value greater than 0.5 is required for the adequacy of the sample. The Bartlett's Test of Sphericity was used to assess whether there was intercedence between items within the same construct. A p-values less than 0.05 is the minimum requirement for the Barlett test.

3.7.4 Cronbach's alpha

Cronbach's alpha was used to assess the internal consistency (reliability) of all multiple item scales. Internal consistency describes the extent to which all the items in a multiple item scale measure the same concept or construct. The value of the Cronbach's Alpha ranges from zero to one and the closer the Cronbach's alpha coefficient is to 1 the greater the internal consistency of the items in the scale.

3.7.5 Pearson's Correlation

Pearson's correlation analysis, which is a measure of the strength of a relationship between two variables, was applied. Pearson correlation coefficients is said to be weak if between 0 and 0.29, moderate if between 0.3 and 0.49, and strong if between 0.5 and 1 (Cohen 1988). The sign of the correlation coefficient shows the direction of the relationship. A positive correlation means that as one variable increases the other variable increases as well while a negative correlation coefficient implies that one variable increases as the other one decreases and vice versa. A p-value of the Pearson's Correlation less than 0.05 implies that the relationships is significant while a p-value greater than 0.05 is an indication of an insignificant relationship.

3.7.6 Multiple Regression Analysis

Multiple Linear Regression analysis is a procedure used to predict the variance in a dependent variable based on linear combinations of interval, dichotomous, or dummy independent variables. It was used to assess the causal relationship between independent variables and entrepreneurial intention.

3.8 Validity and reliability of research design

Various statistical tools were used to ascertain reliability of the research instrument as well as validity of the results.

3.8.1 External Validity

This refers to the research instruments ability to be used elsewhere (Field, 2009). This study sampled 200 high school learners from Johannesburg South, South Africa. Whilst the sample only partially represents the population, and the generalization of the results may be limited as a result of the sample size; due to the fact that the study used valid measures to measure the construct, there is heightened legitimacy for the study (Slavec & Drnovsek, 2012).

3.8.2 Internal Validity

This refers to whether the research instrument actually tests the topic that is being tested (Cooper, Schindler & Sun, 2006). Internal validity indicated the level of accuracy in that the independent variable produced an observable effect (Rowley, 2002). The researcher had ensured that the questionnaire had a logical link to the issues under study to further realise internal validity (Kumar et al., 1999). Construct validity was tested through Exploratory Factor Analysis in SAS.

3.8.3 Reliability

Reliability refers to whether the instrument will repeatedly produce the same results (Slavec & Drnovsek, 2012).This can be tested and adjusted using Cronbach's alpha and looking for scores of 0.7 and above (Nunnally, 1978).The Cronbach's alpha allows you to find the correlation coefficient for each split in the data (Field, 2009). Reliability was ascertained through a pilot study which assisted in clarifying and demystifying any shortcomings. The alpha scores in the research instrument all yielded results in excess of 0.7.

3.9 Limitations of the study

Care should be taken when generalising the results of this study as it only takes into consideration students from one region of the city. As the sample was not random and it was based on convenience, we cannot generalise the results. The actual data collection strategy relied on snowballing to recruit participants across the region. The data was also limited to students that went to private schools only. The results are based on the perceived barriers to entry of the high school students who are not actual entrepreneurs. It does not look at the actual barriers which are faced by actual entrepreneurs. Because the study only used a self-administered survey and is cross-sectional in nature, common-method bias may affect the results. Due to the fact that the syllabus in the schools that are used in this study are driven by Western doctrine, Western-culture bias may be present.

3.10 Research Ethics

Ethics must be considered at every step of research. Participants to research must agree to participate, should not be misled or deceived and their privacy should not be invaded (Diener & Crandall, 1978). Building on this, participants were made aware of duration, risks, data collection procedures and confidentiality. In the case of this study, a cover letter was attached to the front of every questionnaire with a full disclosure of the research that was taking place. Parents or guardians of the students also had to consent to allowing the learners to partake in the research. Students would assist in recruiting other students to participate in the study and only once the

parental consent was received, would the learner complete the survey and participate in the study. As the cover letter / consent form and actual questionnaires were not one document, anonymity was further legitimised as there was no signature or other identity breach in the questionnaires. Each questionnaire only contained a coded number, for reference purposes and no information at all which could potentially identify a respondent. Permission to conduct the research was granted by the Head Master of the school as well as by all of the parents of the children who chose to participate in the research.

3.11 Conclusion

The research method of the study was a quantitative cross-sectional study. The population was high school learners from Johannesburg South, South Africa. Convenience sampling and snowballing was used to gather the data. The research instrument used was a self-administered paper based survey. The four constructs of perceived desirability, perceived feasibility, entrepreneurial intention and regulatory environment were operationalized through variables as noted. Statistically analysis was conducted in SPSS. Head master consent as well as parental consent was received for all surveys that were completed.

4. PRESENTATION OF RESULTS

4.1 Introduction

Two hundred participants were recruited for the study of which 119 gave full and complete responses which qualified for statistical analysis. The gender distribution indicated that 44% of the 119 respondents in the sample were female, 36% were male and the other 20% either preferred not to say or had missing data.

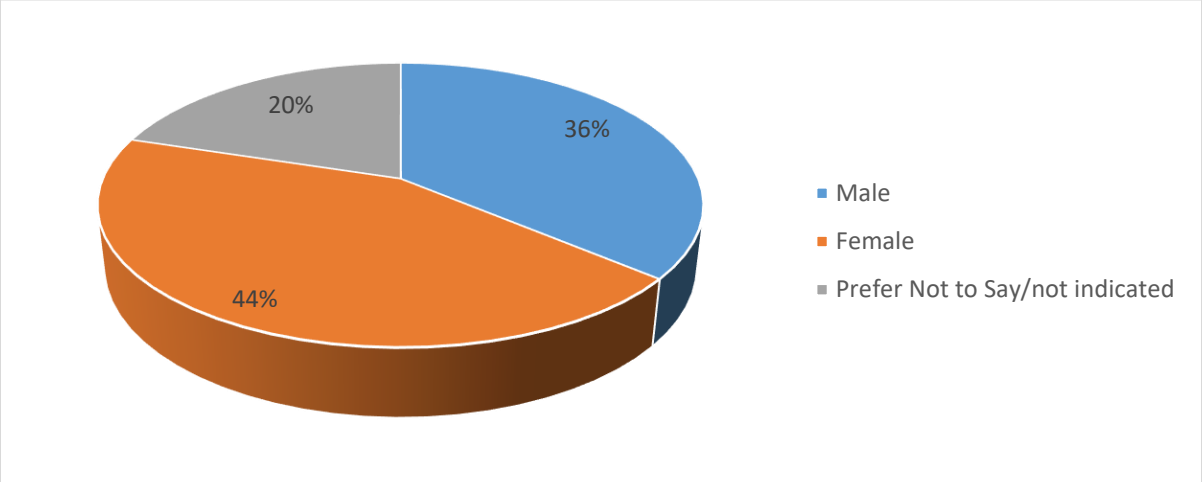

FIGURE 5: RESPONDENT GENDER [SOURCE: PRIMARY DATA]

The bar graph below shows the classes in which the respondents belonged to:

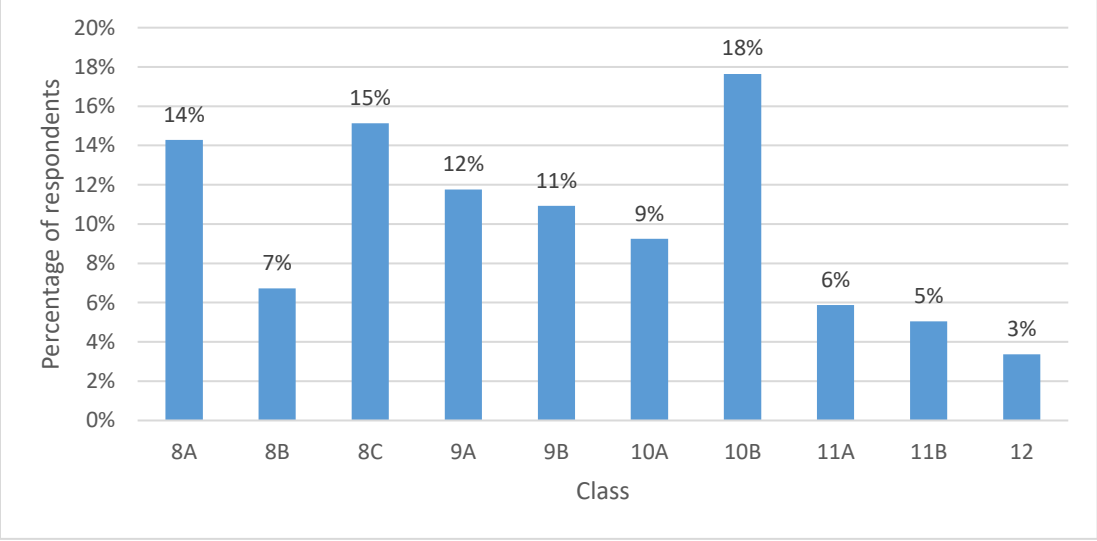

FIGURE 6: CLASS [SOURCE: PRIMARY DATA]

The age distribution of the respondents is shown in Figure 7:

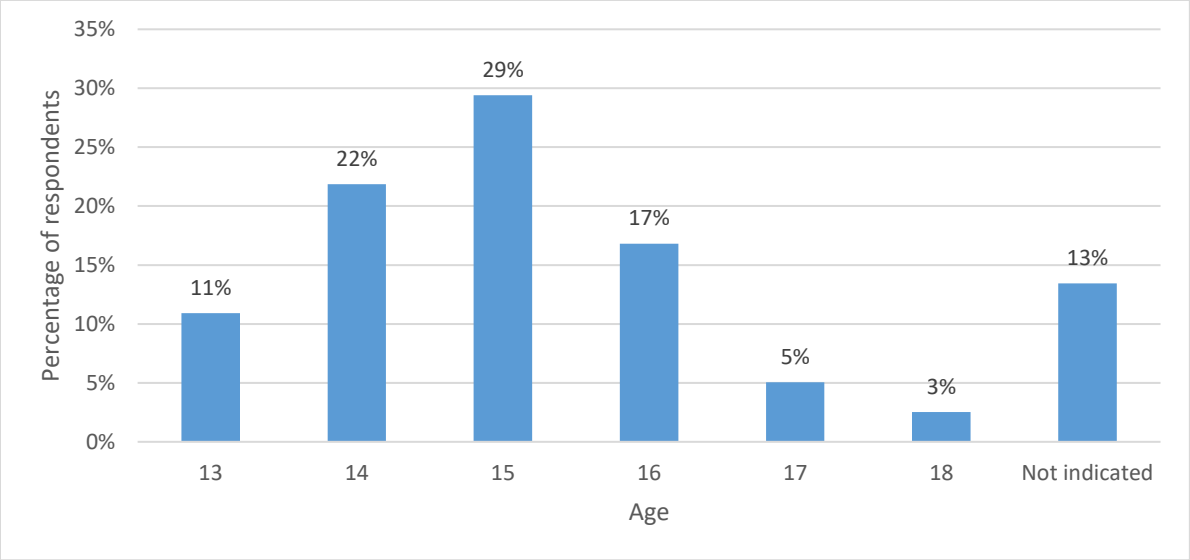

FIGURE 7: AGE [SOURCE: PRIMARY DATA]

It can be noted from the bar chart in Figure 7 that 11% of the respondents were 13 years old, 22% were 14, 29% were 15 years old and the oldest 3% were 18 years old. The table below shows that the average age was 14.893 ± 1.204 years old.

TABLE 3: AGE

	N	Minimum	Maximum	Mean	Std. Deviation
Age	103	13	18	14.893	1.204

[Source: *Primary data*]

4.2 Scale Validity

The validity of the constructs was tested using exploratory factor analysis (EFA). The scale was reversed for PD1r, PD3r, PF2r, PF4r, and PF5r (i.e. 1=7, 2=6, 3=5, 4=4, 5=3, 6=2, 7=1) before analysis as they were negatively worded.

The following items were eliminated during EFA because either they had low communality (value < 0.3) or had low factor loading (factor loading < 0.4).

- PD2 How tense would you be?
- PF1 How hard do you think it would be?
- PF3 How overworked would you be?
- PF4r Do you know enough to start a business?
- PF5r How sure of yourself are you?
- EI2 My professional goal is becoming an entrepreneur
- G1 The government will support my business
- G2 I can get business permits very quickly and easily
- G3 Whilst running my business, I will have no problems when contacting the government

Table 4 shows the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity results for the 4 constructs.

TABLE 4: KMO AND BARTLETT'S TEST

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.816
Bartlett's Test of Sphericity	Approx. Chi-Square	484.3865
	df	55
	Sig.	.000

[Source: *Primary Data*]

The KMO value was 0.816, which was greater than the minimum required value of 0.5. This shows that the sample was adequate to conduct factor analysis. The Bartlett's Test of Sphericity was significant since the p-value was less than 0.05 as required to conduct factor analysis.

Table 5 shows the total variance explained by the retained factors. It can be noted that a total of 3 constructs were extracted as shown by 3 factors with eigen values greater than 1. The retained factors explained 66.815% of variation in the original items.

Table 5 shows the total variance explained by the retained factors. It can be noted that a total of 3 constructs were extracted as shown by 3 factors with eigen values greater than 1. The retained factors explained 66.815% of variation in the original items.

TABLE 5: VALIDITY AND RELIABILITY OF SCALE

Total Variance Explained							
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	4.012	36.474	36.474	3.574	32.493	32.493	3.340
2	2.081	18.922	55.396	1.652	15.016	47.509	1.738
3	1.256	11.419	66.815	.793	7.210	54.720	2.393
4	.720	6.543	73.357				
5	.571	5.191	78.549				
6	.513	4.664	83.213				
7	.455	4.134	87.347				
8	.422	3.838	91.185				
9	.377	3.424	94.609				
10	.314	2.851	97.460				
11	.279	2.540	100.000				
Extraction Method: Principal Axis Factoring.							
a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.							

[Source: *Primary data*]

The scree plot shown in Figure 8 shows that three factors/constructs were retained as there were factors with eigen values greater than 1. It can also be noted that the scree plot flattened out after 3 factors, this shows that the top 3 factors explained most of the variation in the initial items.

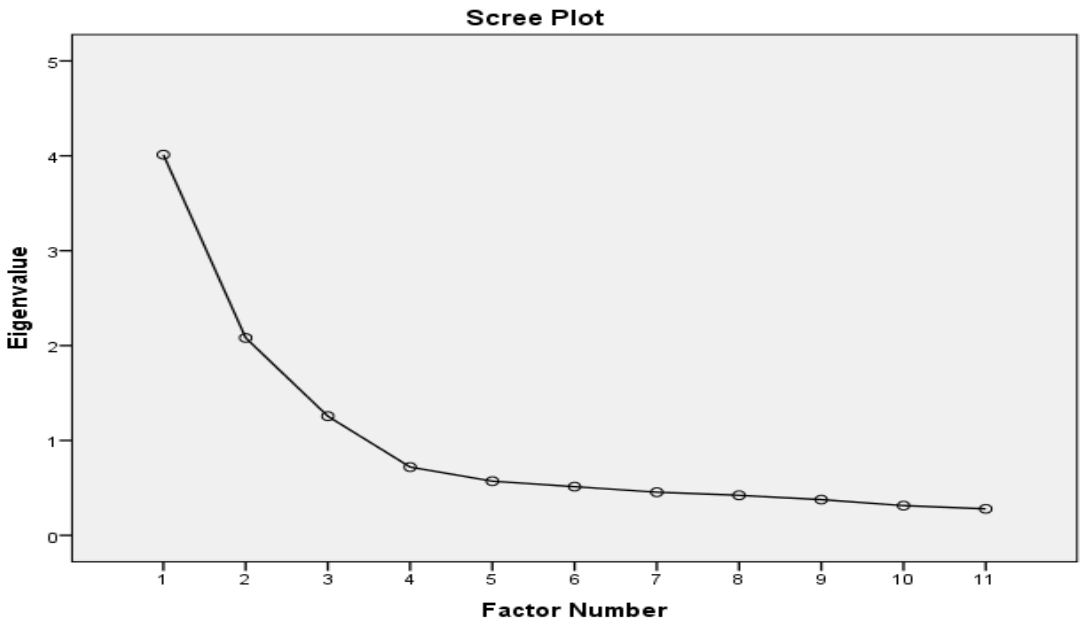

FIGURE 8: SCREE PLOT [SOURCE: PRIMARY DATA]

The composition of the three factors extracted is summarized in the pattern matrix shown in table 6. It can be noted that all the items loaded highly onto their respective factors.

TABLE *6*: PATTERN MATRIX

Construct	Items	Factor		
		1	2	3
Entrepreneurial Intention (EI)	EI6 I have a firm intention to start a firm one day	.847		
	EI4 I am determined to create a firm in the future	.844		
	EI5 I have very seriously thought of starting a firm	.704		
	EI3 I will make every effort to start and run my own firm	.648		
	EI1 I'm willing to do anything to be an entrepreneur	.619		
Environmental Factors (EF)	I1 Existing infrastructure will be sufficient for my purposes of entrepreneurship		.767	
	I2 Existing infrastructure and technology supports innovation		.750	
	I3 Existing infrastructure and technology will be easily maintainable		.731	
Perceived Desirability / Feasibility (PD/F)	PD3r How enthusiastic would you be?			.796
	PD1r How do you feel about starting your own company?			.654
	PF2r How certain of success are you?			.567
	Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalization.			
	a. Rotation converged in 4 iterations.			

[Source: *Primary data*]

4.3 Scale Reliability

The reliability of the scale was assessed using the Cronbach's Alpha. The results are also shown in table 7.

TABLE 7: SCALE RELIABILITY

Construct	Number of items	Cronbach's Alpha	Reliability Level
Entrepreneurial Intention (EI)	5	.858	Good
Environmental Factors	3	.789	Acceptable
Perceived Desirability / Feasibility	3	.737	Acceptable

The results show that Entrepreneurial Intention (5 items, α = 0. 858) had good level of reliability since the Cronbach's Alpha value was greater than 0.8. Environmental Factors – Infrastructure (3 items, α = 0.789) as well as Perceived Desirability/ Feasibility (3 items, α = 0. 737) had acceptable level of reliability since the Cronbach's alpha was greater than 0.7.Since all the three constructs had Cronbach's Alpha values greater than 0.7, items within each construct could be comined still be combined to form a summated scale as the Cronbach's Alpha values were greater than 0.5, below which the reliability will be un acceptable.

Summated scale for each construct was computed by calculating the average of the items within the scale.

The descriptive statistics and Pearson's correlations for the constructs/ subconstructs are shown in table 8.

TABLE 8: DESCRIPTIVE STATISTICS AND PEARSON'S CORRELATION

	Descriptive Statistics		**Correlation coefficients**		
	M	**SD**	**1**	**2**	**3**
1. Perceived Desirability (PD/F)	4.92	1.47	1		
2. Environmental Factors-Infrastructure (EFI)	3.25	1.33	0.067	1	
3. Entrepreneurial Intention (EI)	4.13	1.64	.490**	0.088	1

Notes: M = Variable mean, SD = standard deviation, ** = p < .01, * = p < .05

[Source: *Primary data*]

Results on Pearson's correlation coefficients shows that there is a significant positive association between Entrepreneurial Intention and each of Perceived desirability/Feasibility (r = 0.490, p-value <0.01). The correlation was significant because the p-value was less than 0.05. The correlation Entrepreneurial intention and Environmental Factors – Infrastructure (r = 0.088, p-value > 0.05) was however not statistically significant since the p-value was greater than 0.05.

4.4 Hypothesis Testing

4.4.1 Results pertaining to hypothesis 1 and 3

Hypothesis 1 (H1): Perceived desirability has a positive influence on entrepreneurial intention of high school learners in Johannesburg South.

Hypothesis 3 (H3): Positive perception of the regulatory environment has a positive effect on the relationship between perceived desirability and entrepreneurial intention of high school learners in Johannesburg South.

To assess hypothesis 1 and 3, a multiple regression model was fitted with entrepreneurial intention as the dependent variable, perceived desirability as the independent variable and each of Environmental Factors as moderator variable. Since the Environmental factors construct had 2 sub-constructs, 2 models were fitted with each of Environmental Factors – Infrastructure and Environmental Factors - Government Support in turn. The results are shown below.

When fitting a regression model, it is assumed that the there is a linear relationship between the independent variables and the dependent variable. This assumption was tested by plotting the independent variable against the dependent on a scatter plot as Shown in Figure 9. Trend lines drawn through each scatter plot indicated some linear relationship between the independent variables and the dependent variable. Thus, the assumption of linearity was met.

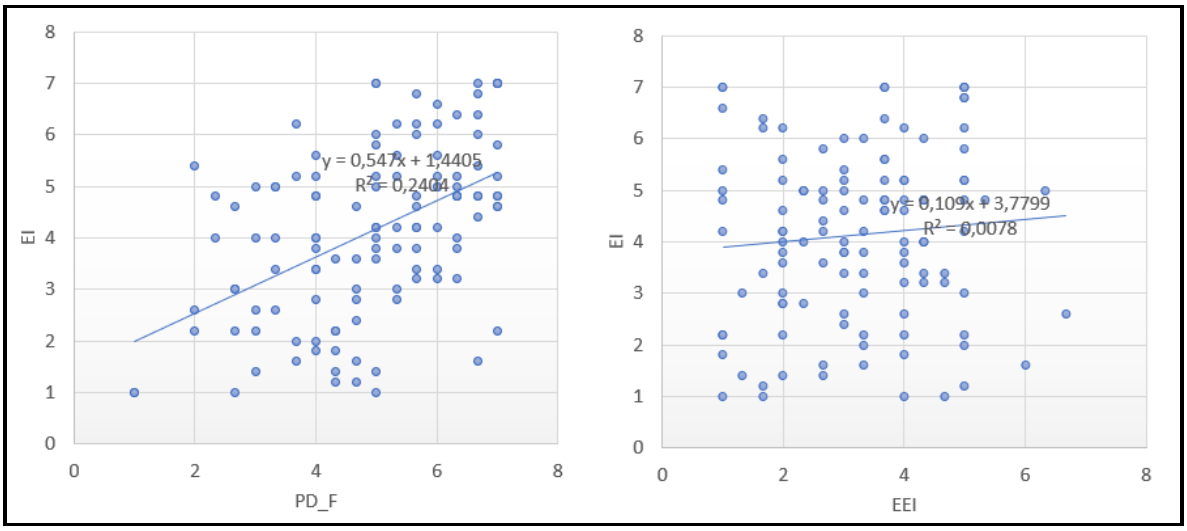

FIGURE *9*: SCATTER PLOTS

The other assumption made when fitting a regression model is that the residuals are normally distributed. This was assessed by plotting a histogram of the residuals and a p-p normality plot. The histogram shown in Figure 5 show that the error terms were normally distributed or approximated the normal distribution since most of the bars fell under the normal curve. The P-P normality plot also on Figure 5 confirmed this result as the residuals plotted close to the diagonal line. These results indicate that the normality of residuals assumption was also met.

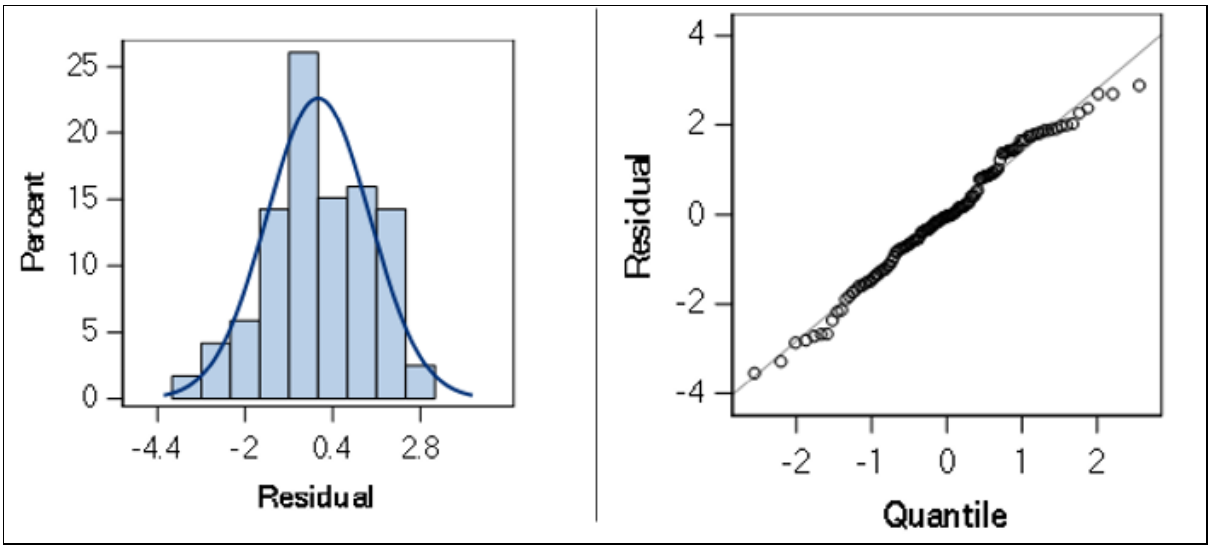

FIGURE *10*: HISTOGRAM AND P-P NORMALITY PLOT OF RESIDUALS

The third regression assumption is that there are no outliers in the data. Outliers are values that are extremely far removed from the rest of the data and negatively affects the quality of the data. A box plot was drawn for each of the three variables to assess if there were no outliers as shown in Figure 11. An outlier is indicated by values placed outside the whiskers of a box and whiskers plot. None of the numbers three variables had outliers as there was no values outside the whiskers for all three variables. This indicates that there were no outliers that could have undue influence the regression model. Thus, the third assumption was met.

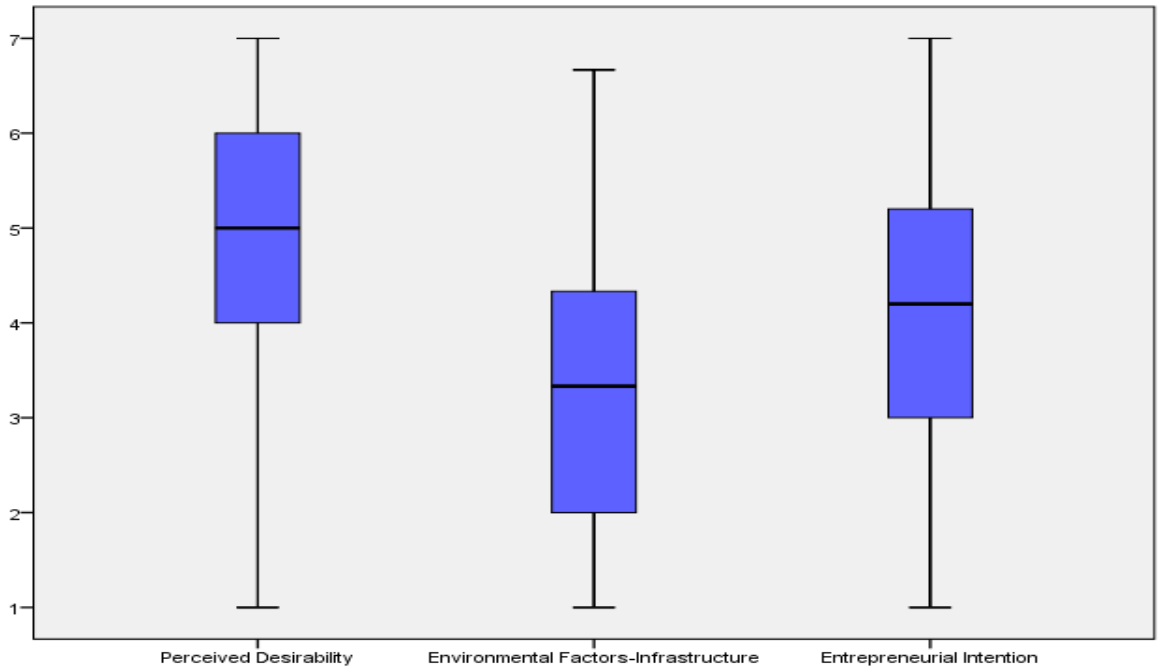

FIGURE *11*: BOX PLOTS

A scatter plot of the residuals against each of the three variables in the model was done to check for heteroscedasticity. The plots are shown in Figure 12. The scatter plots showed that there was no heteroscedasticity as the residuals plotted against the three variables indicated values scattered randomly around zero. Thus, the was homoscedastic assumption was met.

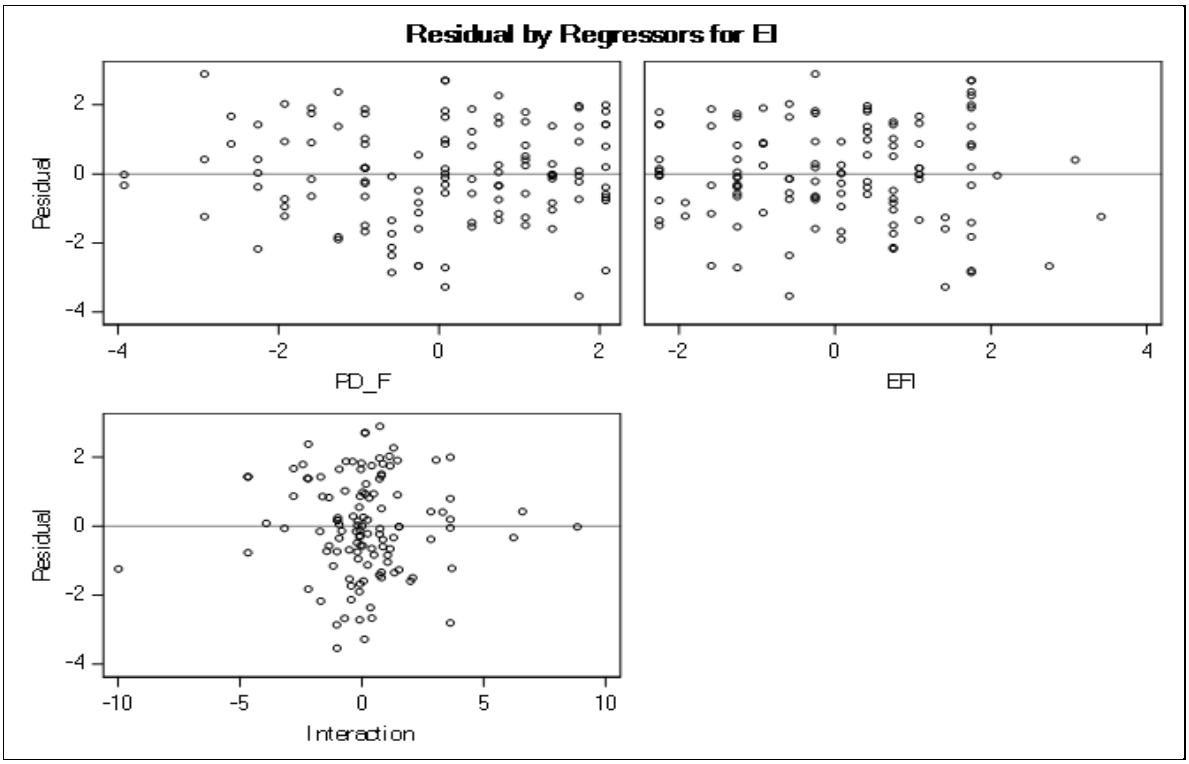

FIGURE *12:* ASSESSMENT FOR HOMOSCEDASTIC

The last assumption is that there is no multicollinearity. Results shown in the table below shows that there was no multicollinearity since the all the variables had a Variance Inflation Factor (VIF) values less than 10. This implies that there is no problem of multicollinearity.

TABLE *10*: PARAMETER ESTIMATES

Parameter Estimates								
Variable	**Label**	**DF**	**Parameter Estimate**	**Standard Error**	**t Value**	**Pr > |t|**	**Standardized Estimate**	**Variance Inflation**
Intercept	Intercept	1	4.14770	0.13122	31.61	<.0001	0	0
PD_F		1	0.53056	0.08991	5.90	<.0001	0.47545	1.01121
EFI		1	0.06823	0.09888	0.69	0.4916	0.05541	1.00457
Interaction		1	-0.10103	0.05968	-1.69	0.0932	-0.13609	1.00667

The results in this section shows that all the regression assumptions were met. This indicates that the regression results are reliable.

4.4.2 Results pertaining to hypothesis 2 and 4

Hypothesis 2 (H2): Perceived feasibility has a positive influence on entrepreneurial intention of high school learners in Johannesburg South.

Hypothesis 4 (H4): Positive perception of the regulatory environment has a positive effect on the relationship between perceived feasibility and entrepreneurial intention of high school learners in Johannesburg South.To assess hypothesis 2 and 4, a multiple regression model was fitted with entrepreneurial intention as the dependent variable, perceived feasibility as the independent variable and each of Environmental Factors as moderator variable. Since the Environmental factors construct had 2 sub-constructs, 2 models were fitted with each of Environmental Factors - Government Support and Environmental Factors – Infrastructure in turn. The results are shown below.

TABLE *9*: MODERATING EFFECT OF ENVIRONMENTAL FACTORS – INFRASTRUCTURE ON RELATIONSHIP BETWEEN PERCEIVED DESIRABILITY AND ENTREPRENEURIAL INTENTION

Moderation Regressions						
	Model 1		Model 2		Model 3	
	B	β	B	β	B	B
Intercept	4.13***	0	4.13***	0	4.15***	0
PD_F	0.55***	0.49	0.54***	0.49	0.53***	0.48
EFI			0.07	0.06	0.07	0.06
PD_F x EFI					-0.1*	-0.14
R-square	0.24		0.24		0.26	

*Notes: *** = p < .01, ** = p < .05, * = p < .10*

The results for model 1 shows that there is a significant positive relationship between entrepreneurial intention and perceived desirability/ Feasibility (B = 0.55, Standardised better = 0.49, p-value < 0.01) since the p-value was less than 0.05. The relationship is positive because the coefficient of Perceived desirability was greater than zero. The model shows that variation in Perceived desirability explains (24% of variation in entrepreneurial intention). Thus, Hypothesis H1 is supported and it is concluded that there is a positive relationship between perceived desirability /Feasibility and entrepreneurial intention.

Model 2 shows that Environmental Factors – Infrastructure on its own has no impact on entrepreneurial intention (B = 0.07, Standardised better = 0.06, p-value > 0.05. On model 3, the introduction of the interaction term (PD_F x EFI) led to a change in the R-Squared, from 0.24% to 0.26.% The variable PD_F x EFI had an insignificant coefficient standardised beta (B = -0.01, Standardised better = -0.014, p-value > 0.05) since the p-value was greater than 0.05. Thus, P1a is not supported. This implies that Environmental Factors – Infrastructure does not moderate the relationship between desirability and entrepreneurial intention.

4.5 Conclusion

The statistical analysis shows support for hypothesis 1 displaying a significant and positive relationship between entrepreneurial intention and perceived desirability yielding (B = 0.48) with a p-value of less than 0.05.

The statistical analysis shows support for hypothesis 2 displaying a significant and positive relationship between entrepreneurial intention and perceived feasibility yielding (B = 0.58) with a p-value of less than 0.05.

It can be noted that the relationship between perceived desirability and entrepreneurial intention is strongest at lower levels of Environmental factors (government support), followed by middle levels Environmental factors (government support) and lowest at high levels of Environmental factors (government support).

The interaction between perceived feasibility and both environmental factors (government support and infrastructure) produced negative and insignificant co-efficients.

The results will be discussed in the next chapter.

TABLE *10*: SUMMARY OF HYPOTHESISES

Hypotheses		**Conclusion**
H1	There is a positive relationship between perceived desirability and entrepreneurial intention.	Supported
H2	There is a positive relationship between perceived feasibility and entrepreneurial intention.	Not tested, the perceived Feasibility was not Valid
H3	Environmental factors moderates the relationship between perceived desirability and entrepreneurial intention	Not supported

H4	Environmental factors– Infrastructure moderates the relationship between perceived feasibility and entrepreneurial intention	Not tested, the perceived Feasibility was not Valid

5. DISCUSSION OF THE RESULTS

5.1 Introduction

In this section, the results noted in chapter 4 are discussed and the findings of the study are ventilated. The findings which apply to the construct of entrepreneurial intention and its relationship between perceived desirability are discussed. The findings which apply to the construct of entrepreneurial intention and perceived feasibility are then discussed. Thereafter, the effect of the perception of the regulatory environment and its impact on the relationship between perceived desirability and entrepreneurial intention is discussed. The final discussion is around the effect of the perception of the regulatory environment and its impact on the relationship between perceived feasibility and entrepreneurial intention. Four hypotheses were set up to assist in answering the aforementioned. Finally, the chapter is concluded.

5.2 Discussion pertaining to hypothesis 1

Hypothesis 1 ("H1") reads as follows: "There is a positive relationship between perceived desirability and entrepreneurial intention".

The objective of H1 was to evaluate the relationship between perceived desirability and entrepreneurial intention amongst high school learners in Johannesburg South. There were three questions in the research instrument which were designed to assess this. These were: How do you feel about starting your own company? ; How tense would you be? ; and How enthusiastic would you be?. Respondents were asked to indicate their responses on a seven-point Likert scale where 1 would be positive towards entrepreneurship and 7 would be negative towards entering entrepreneurship, with question 2 being reverse-scored.

To assess H1, a multiple regression model was fitted with entrepreneurial intention as the dependent variable and perceived desirability as the independent variable. The results for model 1 shows that there is a significant positive relationship between entrepreneurial intention and perceived desirability ($B = 0.48$, Standardised $B = 0.48$, p-value < 0.01) since the p-value was less than 0.05. A significantly positive correlation ($p < 0.1$) as expected which is in line with previous

research (Angriawan et al., 2012; Gerba, 2012). The model shows that variation in perceived desirability explains (26% of variation in entrepreneurial intention).

Based on the results obtained from the three questions which were designed to address H1, the findings suggest that there is a positive relationship between perceived desirability and entrepreneurial intention.

Thus, hypothesis H1 is supported and it is concluded that there is a positive relationship between perceived desirability and entrepreneurial intention.

5.3 Discussion pertaining to Hypothesis 2

Hypothesis 2 ("H2") reads as follows: "There is a positive relationship between perceived feasibility and entrepreneurial intention".

The objective of H2 was to evaluate the relationship between perceived feasibility and entrepreneurial intention amongst high school learners in Johannesburg. There were three questions in the research instrument which were designed to assess this. These were: "How hard do you think it would be?"; "How certain of success are you?"; "How overworked would you be?"; "Do you know enough to start a business?"; and "How sure of yourself are you?". Respondents were asked to indicate their responses on a seven-point Likert scale where 1 would be positive towards entering entrepreneurship and 7 would be negative towards entering entrepreneurship, with questions 1 and 3 being reverse-scored.

H2 was not tested as the items either they had low communality (value < 0.3) or had low factor loading (factor loading < 0.4).

5.4 Discussion pertaining to Hypothesis 3

Hypothesis 3 ("H3") reads as follows: "Positive perception of the regulatory environment has a positive effect on the relationship between perceived desirability and entrepreneurial intention of high school learners in Johannesburg South".

The objective of H3 was to evaluate the effect that the perception of the regulatory environment has on the relationship between perceived desirability and entrepreneurial intention amongst high school learners in Johannesburg South. There were six questions in the research instrument which were designed to assess the perception of the regulatory environment. These were further split into two sections. The first subset of these questions gathered data on perceived government support. The three questions were: The government will support my business; I can get business permits very quickly and easily; and, whilst running my business, I will have no problems when contacting the government. The second subset of questions gathered data on the perceived infrastructural support. The three questions to gather data on this were: Existing infrastructure will be sufficient for my purposes of entrepreneurship; existing infrastructure and technology supports innovation; and, Existing infrastructure and technology will be easily maintainable. Respondents were asked to indicate their responses on a five-point Likert scale where 1 represented no perceived support and 5 represented positive perceived support.

The variable PD x EFI had an insignificant coefficient standardised beta (B = -0.009, Standardised B = -0.014, p-value > 0.05) since the p-value was greater than 0.05. This implies that environmental factors (infrastructure) does not have an effect on the relationship between perceived desirability and entrepreneurial intention.

The interaction term (PD x EFGS) yielded a change in the R-Squared, from 0.26 to 0.28. The variable PD x EFGS had a negative and significant coefficient (B = -0.18, Standardised B = -0.20, p-value < .01) since the p-value was less than 0.05. This implies that there is support for H3 in that environmental factors (government support) has an effect on the relationship between perceived desirability and entrepreneurial intention.

Tus, hypothesis H3 is supported and it is concluded that a positive perception of the regulatory environment has a positive effect on the relationship between perceived desirability and entrepreneurial intention.

5.5 Discussion pertaining to Hypothesis 4

Hypothesis 4 ("H4") reads as follows: "Positive perception of the regulatory environment has a positive effect on the relationship between perceived feasibility and entrepreneurial intention of high school learners in Johannesburg South".

The objective of H4 was to evaluate the effect that the perception of the regulatory environment has on the relationship between perceived feasibility and entrepreneurial intention amongst high school learners in Johannesburg South. There were six questions in the research instrument which were designed to assess the perception of the regulatory environment, divided into two sub-sections being perceived governmental support and perceived infrastructural support as noted in H3 above.

H4 was not tested as the items either they had low communality (value < 0.3) or had low factor loading (factor loading < 0.4).

5.6 Conclusion

The sample had 119 respondents. The gender distribution indicated that 44% of the 119 respondents in the sample were female, 36% were male and the other 20% either preferred not to say or had missing data. The average age of respondents was 14.893 +- 1.204 years old.

The study aimed to investigate the entrepreneurial intentions amongst high school learners in Johannesburg South. The study took to further understand the perceptions of the regulatory environment amongst these learners and the effect that had on the relationship between perceived desirability, perceived feasibility and entrepreneurial intention respectively.

Results pertaining to hypothesis 1 show a positive relationship between perceived desirability and entrepreneurial intention. Hypothesis 1 is a therefore supported.

Findings associated with hypothesis 3 show that a positive perception of the regulatory environment, positively influences the relationship between perceived desirability and entrepreneurial intention. Hypothesis 3 is therefore supported.

Hypotheses 2 and 4 were not tested as the items either they had low communality (value < 0.3) or had low factor loading (factor loading < 0.4).

The findings of the study show that the high school learners surveyed exhibit high levels of entrepreneurial intention. This is consistent with a recent study of entrepreneurial intentions amongst high school learners, albeit in a rural setting (Mkhatshwa, 2017).

International evidence suggests that regulatory environment, or at least the perception thereof, has a major influence on actual entrepreneurial activity. Furthermore, South Africa's employment laws have been seen as being a significant obstacle to business start-ups and growth (Herrington et al., 2010). The findings of this study show that whilst the perception of the regulatory environment impacted the relationship between perceived desirability and entrepreneurial intention, it did not impact the relationship between perceived feasibility and entrepreneurial intention.

Limitations of the study include that the study was cross-sectional in nature, which overlooks the dynamic nature of entrepreneurial intentions as they may well change over time. The study also focused specifically on high school learners from Johannesburg South and the study could be yield different results looking at a different / broader geographical location.

6. CONCLUSIONS & RECOMMENDATIONS

6.1 Introduction

This chapter is apportioned into three parts. The first section sets out the conclusion of this study with reference to the theory. The second section provides recommendations to various stakeholders that are established from the research results. The final section makes suggestions for future and further research.

6.2 Conclusions of the study

The purpose of the study was to investigate the entrepreneurial intention and perception of the regulatory environment of high school learners in Johannesburg, South Africa. It is evident from the results that entrepreneurial intention cultivates from the attitudes that learners hold about starting a business or becoming an entrepreneur. From the results, it follows further that learners develop intentions to start a business based on their perceptions of their ability to perform entrepreneurial behaviour. This is supported and consistent with findings by Lucas, Vermeulen & Curseu (2008); Krishna (2013) and Herrington, Kew & Kew (2014). Following the descriptive statistics that were run on the data collected in this research, this research yields results consistent with prior studies reaffirming the connection between perceived desirability, perceived feasibility and entrepreneurial intention respectively. Whilst the perception of the regulatory environment was shown influence the relationship between perceived desirability and entrepreneurial intention, it do not have an influence on the relationship between perceived feasibility and entrepreneurial intention.

6.3 Recommendations

Government, and more specifically, the Department of Trade and Industry, should take comfort in the knowledge of knowing that high school learners in Johannesburg, South Africa exhibit entrepreneurial intention and leverage off this the ensure that SMME support programmes are

well designed and tailored and support these intentions, attitudes and mind-sets to act on entrepreneurship as a viable career option.

The Department of Education and higher education institutions can design education programmes with a stronger focus on entrepreneurship through curriculum design, hands-on experience and exposure to entrepreneurial role models. This could be the catalyst to action the intentions which these learners possess.

6.4 Suggestions for further research

Whilst the research conducted in this paper attempts to fill some gaps in the existing literature, it does not address all the possible areas of research. The following suggestions are made for future research:

- The participants of this study were high school learners from Johannesburg South, South Africa. In order realise a greater understanding of entrepreneurial intentions amongst high school learners in South Africa, it would be beneficial to perform a similar study in a broader region, compromising of both rural and urban participants. This would provide researchers with a more accurate representation of entrepreneurial intentions in Johannesburg, Gauteng or South Africa.

- In South Africa, entrepreneurship studies to date have been predominantly cross-sectional, such as work by Malebana (2014) and Du Toit & Muofhe, (2011). There is perhaps value in a longitudinal study that can more casually establish a link between entrepreneurial intention and behaviour.

- Researchers could try to test entrepreneurial intentions and the effect of environmental factors amongst developing nations, especially those in Africa. These studies could provide context on similarities and differences between these countries' levels of entrepreneurial intention and the perceived governmental support.

- Future research could be conducted on different and multiple sectors of the population including primary school learners, university students, as well as the employed and unemployed in order to make comparisons of what the constraints and successes are amongst individuals across various stages of their life and professional careers.

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8. APPENDIX A: Consistency Matrix

Aims of research	Literature Review	Hypothesis / Proposition	Source of Data	Type of Data	Analysis
Analyse the relationship between perceived desirability and entrepreneurial intention	Ajzen (1991) Shapero & Sokol (1982) Schlaegal & Koenig (2014) Krueger, Reily & Carsrud (2000)	**H1**: There is no relationship between perceived desirability and entrepreneurial intention	How do you feel about starting your own company? How tense would you be? How enthusiastic would you be?	Questionnaire Qs Likert-scale Ordinal	Descriptive – Frequencies, Diagrams, Charts Measures – Mean and Mode Multivariate – Regression
Analyse the relationship between perceived feasibility and entrepreneurial intention	Ajzen (1991) Shapero & Sokol (1982) Schlaegal & Koenig (2014) Krueger, Reily & Carsrud (2000)	**H2**: There is no relationship between perceived feasibility and entrepreneurial intention	How hard do you think it would be? How certain of success are you? How overworked would you be? Do you know enough to start a business? How sure of yourself are you?	Questionnaire Qs Likert-scale Ordinal	Descriptive – Frequencies, Diagrams, Charts Measures – Mean and Mode Multivariate – Regression
Do environmental factors have an effect on the relationship between perceived desirability and entrepreneurial intention	Indarti & Langenberg (2004) Gnyawali & Fogel (1994) Agboli & Ukaegbu (2006)	**H3**: Environmental factors do not affect the relationship between perceived desirability and entrepreneurial intention	The government will support my business. I can get business permits very quickly and easily. Whilst running my business, I will have no problems when contacting the government. Existing infrastructure will be sufficient for my purposes of entrepreneurship. Existing infrastructure and technology supports innovation. Existing infrastructure and technology	Questionnaire Qs Likert-scale Ordinal	Stepwise Regression Baron and Kenney

			will be easily maintainable.		
Do environmental factors have an effect on the relationship between perceived feasibility and entrepreneurial intention	Indarti & Langenberg (2004) Gnyawali & Fogel (1994) Agboli & Ukaegbu (2006)	**H4**: Environmental factors do not affect the relationship between perceived feasibility and entrepreneurial intention	The government will support my business. I can get business permits very quickly and easily. Whilst running my business, I will have no problems when contacting the government. Existing infrastructure will be sufficient for my purposes of entrepreneurship. Existing infrastructure and technology supports Innovation. Existing infrastructure and technology will be easily maintainable.	Questionnaire Qs Likert-scale Ordinal	Stepwise Regression Baron and Kenney

9. APPENDIX B: Cover Letter and Consent Form



The Graduate School of Business Administration

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The effect of environmental factors on the relationship between perceived desirability and entrepreneurial intention in Johannesburg Study

INFORMATION SHEET AND CONSENT FORM

Who I am

Hello, I am Mitesh Lakha. I am conducting research for the purpose of completing my MM at Wits Business School

What I am doing

I am conducting research on the effect that government and infrastructure perceptions have on the relationship between perceived desirability and entrepreneurial intention in high school learners in Johannesburg, South Africa. I am conducting a quantitative study with 200 respondents to establish whether the perceptions surrounding government and infrastructure support have any effect on the relationship between perceived desirability and entrepreneurial intention.

Your participation

I am asking you whether you will please complete the accompanying questionnaire. If you agree, please first ensure that your parent / guardian allows and agrees for you to complete this questionnaire by way of them signing in the respective place on the next page. If they agree, I sincerely ask that you then complete the accompanying questionnaire which will take you no longer than 10 minutes.

Please understand that **your participation is voluntary** and you are not being forced to take part in this study. The choice of whether to participate or not, is yours alone. If you choose not take part, you will not be affected in any way whatsoever. If you agree to participate, you may stop participating in the research at any time and only complete what you are comfortable with. If you do this there will also be no penalties and you will NOT be prejudiced in ANY way.

Confidentiality

Any study records that identify you will be kept confidential to the extent possible by law. The records from your participation may be reviewed by people responsible for making sure that research is done properly, including my academic supervisor/s. (All of these people are required to keep your identity confidential.)

All study records will be destroyed after the completion and marking of my thesis. I will refer to you by a code number or pseudonym (another name) in the thesis and any further publication.

Risks/discomforts

At the present time, I do not see any risks in your participation. The risks associated with participation in this study are no greater than those encountered in daily life.

Benefits

There are no immediate benefits to you from participating in this study. However, this study will be extremely helpful to us in greater understanding potential moderating sources on entrepreneurial intention and its antecedents.

If you would like to receive feedback on the study, I can send you the results of the study when it is completed sometime after 1 July 2017.

Who to contact if you have been harmed or have any concerns

This research has been approved by the Wits Business School. If you have any complaints about ethical aspects of the research or feel that you have been harmed in any way by participating in this study, please contact the Research Office Manager at the Wits Business School, Mmabatho Leeuw. Mmabatho.leeuw@wits.ac.za

If you have concerns or questions about the research you may call my academic research supervisor Mr Diran Soumonni on 011-717-3646

CONSENT

I hereby agree to participate in research on whether the perceptions surrounding government and infrastructure support have any effect on the relationship between perceived desirability and entrepreneurial intention. I understand that I am participating freely and without being forced in any way to do so. I also understand that I can stop participating at any point should I not want to continue and that this decision will not in any way affect me negatively.

I understand that this is a research project whose purpose is not necessarily to benefit me personally in the immediate or short term.

I understand that my participation will remain confidential.

……..

Signature of participant **Date**:……..

……..

Signature of parent / guardian **Date**:……..

10. APPENDIX C: Research Instrument

a) How old are you? _____

b) Are you:

Male	Female	Prefer Not to Say

Q1	*How do you feel about starting your own company?*		*1 = I would love doing it*	*7 = I would hate doing it*
Q2	*How tense would you be?*		*1 = very tense*	*7 = not tense at all*
Q3	*How enthusiastic would you be?*		*1 = very enthusiastic*	*7 = very unenthusiastic*
Q4	*How hard do you think it would be?*		*1 = very hard*	*7 = very easy*
Q5	*How certain of success are you?*		*1 = very certain of success*	*7 = very certain of failure*
Q6	*How overworked would you be?*		*1 = very overworked*	*7 = not overworked at all*
Q7	*Do you know enough to start a business?*		*1 = I know everything*	*7 = I know nothing*
Q8	*How sure of yourself are you?*		*1 = very sure of myself*	*7 = very unsure of myself*
Q9	*I'm willing to do anything to be an entrepreneur*		*1 = total disagreement*	*7 = total agreement*
Q10	*My professional goal is becoming an entrepreneur*		*1 = total disagreement*	*7 = total agreement*
Q11	*I will make every effort to start and run my own firm*		*1 = total disagreement*	*7 = total agreement*
Q12	*I am determined to create a firm in the future*		*1 = total disagreement*	*7 = total agreement*
Q13	*I have very seriously thought of starting a firm*		*1 = total disagreement*	*7 = total agreement*
Q14	*I have a firm intention to start a firm one day*		*1 = total disagreement*	*7 = total agreement*
Q15	*The government will support my business*		*1 = strongly disagree*	*5 = strongly agree*
Q16	*I can get business permits very quickly and easily*		*1 = strongly disagree*	*5 = strongly agree*
Q17	*I will have no problems when contacting the government if I need to*		*1 = strongly disagree*	*5 = strongly agree*
Q18	*Existing infrastructure will be sufficient for my purposes of entrepreneurship*		*1 = strongly disagree*	*5 = strongly agree*
Q19	*Existing infrastructure and technology supports innovation*		*1 = strongly disagree*	*5 = strongly agree*
Q20	*Existing infrastructure and technology will be easily maintainable*		*1 = strongly disagree*	*5 = strongly agree*

Thank you for your participation…

11.APPENDIX D: Coding for Research Instrument

Construct	Variable	Question			
IV1	PD1r	How do you feel about starting your own company?		*1 = I would love doing it*	*7 = I would hate doing it*
IV1	PD2	How tense would you be?		*1 = very tense*	*7 = not tense at all*
IV1	PD3r	How enthusiastic would you be?		*1 = very enthusiastic*	*7 = very unenthusiastic*
IV2	PF1	How hard do you think it would be?		*1 = very hard*	*7 = very easy*
IV2	PF2r	How certain of success are you?		*1 = very certain of success*	*7 = very certain of failure*
IV2	PF3	How overworked would you be?		*1 = very overworked*	*7 = not overworked at all*
IV2	PF4r	Do you know enough to start a business?		*1 = I know everything*	*7 = I know nothing*
IV2	PF5r	How sure of yourself are you?		*1 = very sure of myself*	*7 = very unsure of myself*
DV	EI	I'm willing to do anything to be an entrepreneur		*1 = total disagreement*	*7 = total agreement*
DV	EI	My professional goal is becoming an entrepreneur		*1 = total disagreement*	*7 = total agreement*
DV	EI	I will make every effort to start and run my own firm		*1 = total disagreement*	*7 = total agreement*
DV	EI	I am determined to create a firm in the future		*1 = total disagreement*	*7 = total agreement*
DV	EI	I have very seriously thought of starting a firm		*1 = total disagreement*	*7 = total agreement*
DV	EI	I have a firm intention to start a firm one day		*1 = total disagreement*	*7 = total agreement*
M	G	The government will support my business		*1 = strongly disagree*	*5 = strongly agree*
M	G	I can get business permits very quickly and easily		*1 = strongly disagree*	*5 = strongly agree*
M	G	Whilst running my business, I will have no problems when contacting the government		*1 = strongly disagree*	*5 = strongly agree*
M	I	Existing infrastructure will be sufficient for my purposes of entrepreneurship		*1 = strongly disagree*	*5 = strongly agree*
M	I	Existing infrastructure and technology supports innovation		*1 = strongly disagree*	*5 = strongly agree*
M	I	Existing infrastructure and technology will be easily maintainable		*1 = strongly disagree*	*5 = strongly agree*