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2020
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Business development services training and entrepreneurial Self-Efficacy: comparing necessity and opportunity-driven entrepreneurs in 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 in Entrepreneurship and New Venture Creation

Johannesburg, 2020

ABSTRACT

Small businesses in South Africa struggle to make it to the established business phase, while the high unemployment rate, as well as the many retrenchments that the country has been facing, continue to bring a surge of entrepreneurs who find themselves going into business as it is their only means of making a living. Business Development Services (BDS) have been targeted to improve the performance of firms, one of their service categories being skills training proves to develop entrepreneurial self-efficacy. The objective of this study was to determine the impact of BDS training on the entrepreneurial self-efficacy of necessity- and opportunity-driven entrepreneurs, and whether that impact would be more positive in opportunity-driven rather than necessity-driven entrepreneurs.

This was a quantitative study which collected primary data from 519 entrepreneurs of which 97 were necessity-driven and 422 were opportunity-driven. First, statistical analysis were conducted using correlation analysis and multiple linear regression to test the impact of training on the ESE of necessity and opportunity-driven entrepreneurs, while removing the impact of confounding variables: gender, education, management experience, industry experience, and partnerships. Second, independent sample T-test was performed to compare the entrepreneurial self-efficacy levels of necessity- and opportunity-driven entrepreneurs after training.

The empirical evidence from this study found that general entrepreneurial training is more effective in increasing the entrepreneurial self-efficacy of opportunity-driven entrepreneurs, whereas task-specific training was better suited for increasing the entrepreneurial self-efficacy of necessity-driven entrepreneurs. The study also found that the ESE levels of necessity- and opportunity-driven entrepreneurs were similar after training, thus indicating that training in entrepreneurial self-efficacy plays a developmental role, giving entrepreneurs, whether necessity or opportunity-driven, the confidence to execute entrepreneurial tasks and thus assisting them to run sustainable businesses;

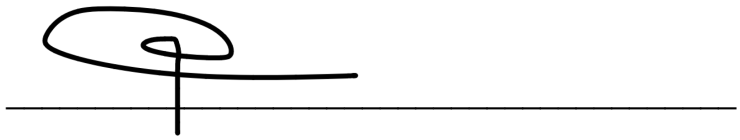
rather than a transformational role of converting entrepreneurs from necessity-driven into opportunity-driven.

The implications and recommendations of this study are thus that policy makers design general entrepreneurial training programmes targeted at opportunity-driven entrepreneurs, and task-specific training programmes targeted at necessity driven entrepreneurs; these types of training would best increase the entrepreneurial self-efficacy of necessity- and opportunity-driven entrepreneurs and will enable these entrepreneurs to run sustainable businesses that contribute positively to the sustainability rate of businesses.

Keywords: business development services, BDS training, necessity and opportunity entrepreneurs, entrepreneurial self-efficacy.

DECLARATION

I, Tshegofatso Eister, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Management in Entrepreneurship and New Venture Creation at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.



TSHEGOFATSO EISTER

Signed at …Fichardt Park, Bloemfontein……..

On the ……26…….. day of ……March ……..… 2020…..

DEDICATION

This research report is dedicated to my parents. Your love and support knows no bounds.

I thank God for choosing you for me.

> *Dear God. I remember early on, during the beginning months of this Master's degree, when I realised that all of my colleagues have Sundays to work on their assignments, theses and everything else. I let you know that you are going to have to take care of me since I spent my Sundays serving at church, plus Thursdays was band practice. Yes ok, I had to give up 'home cell' because three days would have just been too much. You answered all my prayers the biggest one being that I pass all my modules. I would do this again and make no sacrifice towards my service and duty to you. Being in the worship team is my life and you sustaining me in my studies while continuously serving in my ministry… you are all I need. All glory to you God. My greatness is loading, and this is but just one vehicle for that loading.*
>
> *I love you.*

ACKNOWLEDGEMENTS

My parents: Thank you for support in this and many other endeavours of my life. I am because of your constant sacrifices and love. Words can never quantify what you both mean to me.

Ntate Papi Mokoena: Your generosity in assisting me to pay for my school fees is much appreciated.

My study-buddy Elliot: All the days and nights we spent in the syndicate rooms… the laughs, the cries, the complaints, the hard work, the shared meals, the snacks, the *nyaope*… Working this journey with you turned out to be way better than what I thought it would be.

Dr J: The thing I appreciated most about you was how available you were, your odd working hours, and your capacity to engage in even the most remedial questions were such a blessing. Thank you for all the work, effort, and care that you put into making sure that we, your students, succeed. I wish you success in all that you do.

My siblings and friends: For allowing me to be a physically and emotionally absent and for continuing to love me and support me.

Ous Meisie: Many of us owe these degrees to you. You complain when we buy you chocolates to thank you and I know you would probably also frown at a salad as a token gesture. Thank you so much. Here comes one last slab of chocolate.

Catalyst for Growth (C4G): Data collection was a breeze thanks to having access to your database. Your initiative of wanting to work with WBS was the best opportunity and tool that I needed to complete this research report. It has been a pleasure working with you all at C4G.

Ntuthuko: My second husband in research. Thank you for your care during the entire MMENVC period and for keeping me calm during data collection, while you made sure we got the responses that we needed.

Part 1, 2, 3, 4 or 5 aka Team-no-sleep: Sharing the burden with you all was instrumental in assisting me to complete this Master's Degree. I will forever be grateful.

My editor, Angela Urban: I don't know if I should thank you because after all your hard work, I now doubt my ability to speak the English language. You were so professional, diligent, and timely. Thank you so much for your skill and the finesse with which you handled everything. It was a pleasure working with you. I trust we will work together again.

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LIST OF ACRONYMS

BDS	Business Development Services
C4G	Catalyst for Growth
DV	Dependent Variable
EFA	Exploratory Factor Analysis
ESE	Entrepreneurial Self-Efficacy
GEM	Global Entrepreneurship Monitor
IV	Independent Variable
MD	Market Development
OBM	Original Brand Manufacturing
ODM	Original Design Manufacturing
OEM	Original Equipment Manufacturing
SMMEs	Small, Medium, and Micro Enterprises
TD	Traditional Development

CHAPTER 1: INTRODUCTION

This chapter begins by providing the context of the study, the entrepreneurial theory pertaining to this study, motivation for the study, and problem statement. The research aims and questions of the study are then presented. The conceptual definitions are highlighted, along with the contribution of the study, and delimitations to the study are briefly discussed. The chapter closes with the assumptions pertaining to the study and a synopsis of the structure of the report.

1.1 Context of the study

Entrepreneurs in South Africa have received attention from various interest groups, which include the government and scholars; this is mainly because of the socio-economic value that they contribute (Mazanai & Fatoki, 2012). They play a developmental role in many developing countries, contributing to output, employment and growth (Lee, Song, & Kwak, 2015). Small, Medium and Micro Enterprises (SMMEs) account for over 95 per cent of all businesses, generate roughly 50 per cent of output worldwide and account for 60 to 90 per cent of employment (Knight, 2001). Nevertheless, SMMEs in South Africa have one of the worst sustainability rates (Bruwer & Smith, 2018) and the largest failure rate in the world (Mazanai & Fatoki, 2012). The high failure rate can be attributed to liability of newness and other factors such as poor managerial skills, operational skills, inadequate training of staff, intense competition, and the cost of doing business (Bruwer & Smith, 2018; Fatoki & Garwe, 2010).

Many governments have jumped on the bandwagon of promoting entrepreneurship in an effort to fight unemployment (Green, 2013). Relating to the state of affairs in the South African context, Preisendörfer, Bitz, and Bezuidenhout (2012) observed two actualities: (1) the number of start-ups have been showing a significant increase and (2) black people, who account for roughly 80 per cent of the population, have a low participation rate in entrepreneurship compared to other races. In their study, trying to discover why

there is very little entrepreneurial activity among black people, Preisendörfer et al. (2012) identified five empirical reasons: (1) the historical affliction of apartheid where black people and coloured people were restricted by law to start and run their own businesses in most industries in the economy, (2) lack of financial resources, (3) lack of education due to low level schooling, (4) traits and mindsets that are not entrepreneurial, such as lack of self-confidence and fear of failure, and (5) lack of social capital due to a lack of trust and lack of entrepreneurial role models.

South Africa finds itself in a dire situation where the unemployment rate in 2019 was at 29.1 per cent, its highest rate since 2013 (Trading Economics, 2019). Attached to this increase in unemployment are high levels of company retrenchments due to tough economic times, putting a further dent on the high unemployment rate (Seteni, Joubert, & Dhurup, 2019).

Push factors have become more prevalent thereby causing the predominance of necessity entrepreneurship. (Venter & Urban, 2015). Necessity entrepreneurs are those that are pushed into entrepreneurship due to negative influences such as unemployment (Dencker, Bacq, Gruber, & Haas, 2019); the focus has been on differentiating them from opportunity-driven entrepreneurs who are pulled into entrepreneurship by its attractiveness.

Entrepreneurial self-efficacy (ESE) is defined as the strength of an individual's belief in their capability to successfully execute the tasks and roles that are prevalent in entrepreneurship and has been identified as an influencer of an individual's intention to create a new venture (Chen, Greene & Crick, 1998; McGee & Peterson, 2019) . Mauer, Neergaard, and Linstad (2017) state that there has been an increase in empirical research on self-efficacy within the entrepreneurship field and identified two drivers that have spurred the interest in self-efficacy, especially in entrepreneurship literature. First, there is a need to produce more entrepreneurs due to the positive economic contribution that they make. Second, entrepreneurship as a field has struggled to produce personality traits that are unique to entrepreneurship.

As a result of the low sustainability rates of SMMEs in the country, the South African government has implemented a host of initiatives geared towards the needs of entrepreneurs (Gherhes, Williams, Vorley, & Vasconcelos, 2016). Business Development Services (BDS) are one of those initiatives that offer non-financial support to entrepreneurs to improve their capabilities (Okeyo, Gathungu, & K'Obonyo, 2014). The dimensions of BDS include market access, infrastructure, policy and advocacy, input supply, training and technical assistance, technology and product development, and alternative financing mechanisms (Miehlbradt & McVay, 2003). Skills training of entrepreneurs are one of the service categories of BDS (Shezi, 2019); however, even with this support, SMME failure rates persist (Fatoki & Garwe, 2010). This study determines the impact of BDS training on the ESE of necessity- and opportunity-driven entrepreneurs and to determine whether that impact would be more on opportunity- rather than necessity-driven entrepreneurs.

1.2 Theoretical discussion

Entrepreneurship as a process is known to unfold because of the individual that pursues entrepreneurial opportunities (Venter & Urban, 2015); entrepreneurs cause entrepreneurship, hence the human capital derivative. Human capital is defined as the knowledge and skills that are acquired by an individual through investments in education, on-the-job training and other experiential exposure (Venter & Urban, 2015).

According to Gratton and Ghoshal (2003, p. 3) human capital comprises three elements: intellectual capital, emotional capital, and social capital. Intellectual capital consists of "cognitive complexity, learning capability, specialised knowledge and skills, and tacit knowledge" and that knowledge, rather than money, is the underlying factor that has increasingly been differentiating firms from their competitors thereby giving them competitive advantage

Human capital was the theory pertinent to this study as it formed the theoretical background of the individual behind entrepreneurship. Goyal, Sergi, and Esposito (2018, p. 313) stated that "countries make continuous efforts to

recognise and encourage the establishment of entrepreneurs and growth of SMMEs by improving policy initiatives, promoting cluster-based setups as well as facilitating business advice, training and skill-building programs". Many studies have proven empirically the positive relationship that exists between human capital and entrepreneurial performance; furthermore, Marimuthu, Arokiasamy, and Ismail (2009) reasoned that training has also been proven to be of extreme importance to human capital theory. The Global Entrepreneurship Monitor (GEM) conceptual framework is premised on the notion that economic growth relies on the interdependency between the skills and competencies of the entrepreneur and entrepreneurial framework conditions, such as national policy. The GEM report (Reynolds, Camp, Bygrave, Autio, & Hay, 2001) first conceptualised necessity- and opportunity-driven entrepreneurs. Islam, Khan, Obaidullah, and Alam (2011) are of a similar opinion, that the characteristics of the entrepreneur have a significant effect on firm performance, with BDS offering skills training to achieve that effect. ESE has been found to improve the performance of young firms (McGee & Peterson, 2019); therefore, it seemed worthy, in this study, to determine whether BDS training had as effect on ESE, and in response to the call by McGee, Peterson, Mueller, and Sequeira (2009), determine the differences in the effect of the ESE dimensions individually among necessity- and opportunity-driven entrepreneurs.

1.3 Motivation for the study and problem statement

Block and Wagner (2010) believed that the field of entrepreneurship could profit from understanding the differences between necessity- and opportunity-driven entrepreneurs. The authors deemed that distinguishing between the two types of entrepreneurs helps to further the understanding of the socioeconomic characteristics, the differences in the opportunities that are pursued and profitability that is attained, as well as the determinants of success.

One of the challenges raised, about the development and application of ESE as a construct, is that data collected has been excessively dependent on university students and practicing entrepreneurs, rather than nascent entrepreneurs

(McGee et al., 2009). Nevertheless, this research focused on practicing entrepreneurs: the SMME survival rate is dismal and this study hoped to argue that because the SMME survival rate is determined by practicing entrepreneurs, studies that target existing entrepreneurs would be able to be applied to nascent entrepreneurs, as they would be applying recommendations that have been tested and tried. Mauer et al. (2017, p. 246) believed that ESE is a “subconscious social persuasion”, given rise through an interaction with the environment, as such this study sought to pursue that belief by determining the effect of the ESE dimensions individually on necessity- and opportunity-driven entrepreneurs.

McGee et al. (2009) believed that targeting current entrepreneurs has another set of limitations, that such individuals have already started their own businesses and that their perceptions of ESE must be retroactive. Furthermore, Markman, Balkin, and Baron (2002), implied that the causal direction of ESE would be hard to determine whether creating a new venture increases an individual’s ESE or whether a high ESE causes an individual to start a new company. It is on the ambiguity of this limitation that this research sought to make its argument. Because of the push factors that force an individual into entrepreneurship, this study believed that at a point of desperation and with no way out, an individual does not have the luxury to decide on their ability to carry out great entrepreneurial exploits. This study argued that entrepreneurship in the South African context is marred by contextual complexities that challenge some empirical findings and recommendations of extant literature. The unemployment in South Africa that has been showing consecutive signs of growth, many companies have been retrenching staff (Business Insider South Africa, 2019), and with that is an influx of individuals who do not fit the typical characteristics of necessity-driven entrepreneurs (Preisendörfer et al., 2012). These individuals find themselves forced to make alternative means of income, such as starting their own businesses; with the various BDS they might find themselves undergoing training, to improve their entrepreneurial skills, after having started their business.

The question that can be asked is whether ESE is an antecedent of entrepreneurial intentions. With the South African environmental factors forcing

individuals to go into business, the causal direction of ESE that Markman et al. (2002) suggested can apply. Consequently, this study reasoned that entrepreneurial intentions are a luxury applicable to opportunity-driven entrepreneurs, whereas in desperation to make ends meet, individuals deciding whether they are entrepreneurial or not is something that will become evident through trial and error. Block, Kohn, Miller, and Ullrich (2015) validated that standpoint in the research that they conducted on the different competitive strategies that necessity- and opportunity-driven entrepreneurs take. The authors found that due to time and resource constraints, necessity-driven entrepreneurs are often in a less favourable position and opt for a cost-leadership strategy, which requires no exceptional skill, rather than opportunity-driven entrepreneurs who have had time to develop a differentiated product and have the skills to pursue that strategy.

Chen et al. (1998) believed that ESE can be diagnosed and treated in existing entrepreneurs, McGee et al. (2009) stated that there is limited understanding of ESE once the business is operating, and ESE can be developed through entrepreneurial training programmes, even while the business is already operative (Mauer et al., 2017). Therefore, the context of this study was that of existing businesses where the entrepreneurs that run them sought to improve their ESE in order to contribute to the performance of their businesses. As training is meant to be a catalyst of SMME performance, the study by Botha, Van Vuuren, and Kunene (2015) revealed that business and entrepreneurial skills are important in determining SMME performance. Their study recommends that entrepreneurial training should focus on the skills that established business entrepreneurs find important, because according to the GEM Report (Singer, Herrington, & Menipaz, 2018), many small businesses in the nascent entrepreneurial stage struggle to make it to the established business state.

This study therefore determines the impact of BDS training on ESE, while taking into consideration the effect of the different ESE dimensions comparatively on necessity- and opportunity-driven entrepreneurs.

1.4 Aims of the study

The aim of this study is to compare the impact of BDS training on the ESE of necessity- and opportunity-driven entrepreneurs and to concurrently determine whether opportunity-driven entrepreneurs have a higher ESE than necessity-driven entrepreneurs.

1.4.1 Aim 1

To determine whether BDS training (marketing, innovation, management, risk-taking and financial control) has a more positive impact on the ESE (marketing, innovation, management, risk-taking and financial control) of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.

1.4.2 Aim 2

To determine whether the ESE (marketing, innovation, management, risk-taking and financial control) of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.

1.5 Research questions

The study intended to answer the following research questions in an attempt to achieve the study's aims:

1.5.1 Research question 1

To what extent does training (marketing, innovation, management, risk-taking and financial control) have a more positive impact on the ESE (marketing, innovation, management, risk-taking and financial control) of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs?

1.5.2 Research question 2

To what extent is the ESE (marketing, innovation, management, risk-taking and financial control) of opportunity-driven entrepreneurs higher than that of necessity-driven entrepreneurs?

1.6 Definition of terms

- *Small, medium and micro enterprises (SMMEs):* As per the expansion on the definition in the White Report, the different categories of businesses fall within their classification by virtue of the number of full-time employees that they pay, the company's annual turnover, as well as the total gross value of their assets. (RSA, 1995).

- *Business development services (BDS):* Non-financial support that business development providers offer to SMMEs. Dimensions include: market access, infrastructure, policy/advocacy, input supply, training and technical assistance, technology and product development, and alternative financing mechanisms (Goyal et al., 2018; Miehlbradt & McVay, 2003).

- *Entrepreneurial self-efficacy (ESE):* the strength of an individual's belief in their capability to successfully execute the tasks and roles that are prevalent in entrepreneurship (Chen et al., 1998), or an individual's belief that he is capable of successfully carrying out the tasks and roles of an entrepreneur (Chen et al., 1998; McGee et al., 2009).

- *Necessity-driven entrepreneurship:* Entrepreneurship that results due to negative factors, such as unemployment, that pushes individuals into entrepreneurship (Dencker et al., 2019).

- *Opportunity-driven entrepreneurship:* Entrepreneurship that takes place due to the individual taking advantage of market opportunities (Dencker et al., 2019).

1.7 Contribution of the study

In Germany and other industrialised countries, policies for start-ups often differentiate between necessity- and opportunity-driven entrepreneurs (Block & Wagner, 2010), and instead of just focusing on funding based on the two types of entrepreneurs, other factors such as human capital variables could be taken into consideration. Accordingly this study hoped to contribute to extant literature on necessity-driven entrepreneurship, as it dominates the South African economy (Caliendo & Kritikos, 2019); as well as to enhance an understanding of necessity-driven entrepreneurs and assist them to grow profitable businesses that can contribute to the South African economy. As such, the unit of the analysis was the entrepreneur.

McGee et al. (2009, p. 969) recommended that future studies measure ESE as a multi-dimensional construct by focusing on the different dimensions of ESE and their impact individually, rather than focusing on total ESE as that "dilutes the multi-dimensionality of the construct". As a result, this study responded to the call by these authors and sought to determine the impact of the different ESE dimensions individually. In this way, it would determine which dimensions are the most influential. This direction would simultaneously build on the study by Botha et al. (2015) by narrowing down the different business and entrepreneurial skills by order of importance. McGee et al. (2009) are also of the opinion that an understanding of the role of ESE after the start-up phase of new ventures is limited. The aim of this research was to determine the role of ESE after the new venture has been created, motivated by the factors that force individuals into entrepreneurship rather than through the cognitive process of first determining their ESE and consequently their intentions to pursue entrepreneurship. The South African context, at times, does not allow the luxury of choosing entrepreneurship as a career option; rather, ferocious macro-economic conditions force individuals into entrepreneurship. This research sought to unpack ESE from the point where individuals have to build a business and therefore seek to improve their ESE, rather than from the point of individuals determining whether they wanted to choose entrepreneurship before embarking on their venture.

1.7.1 Theoretical implications

Extant literature on BDS has covered various dimensions of BDS. This study focused on the skills that established businesses regard as important (Botha et al., 2015). The desired result would be that if those businesses managed to make it to the established business phase, nascent businesses could learn from them and gain efficiency in the very skills that established businesses regard as most important. The results of this study would contribute empirically to BDS literature in terms of training and ESE, and would contribute to the factors that affect or are affected by necessity-driven and opportunity-driven entrepreneurship.

1.7.2 Practical implications

This study sought to provide practical solutions based on empirical evidence, which can contribute to the measurement of the impact that BDS training has on the ESE of necessity- and opportunity-driven entrepreneurs. The study could add value to BDS providers by informing them about the effectiveness of their skills training programmes on ESE. Taking into consideration the necessity versus opportunity motives would help to hone training based on entrepreneurs' cognitive dispositions.

1.8 Delimitations to the study

The definition of necessity- and opportunity-driven entrepreneurs for this study is based on the respondents' state of unemployment at the time they started their new venture. Mixed-motivated entrepreneurs, those who started their business out of both necessity- and opportunity-driven motives were excluded as they did not fall within the scope of the study.

There are four dimensions which form part of the personality construct, which if researched together could form a better study. However due to time and resource constraints only self-efficacy was the focus for this study.

Many theories can serve as background to the study, this study focused on human capital and social cognitive theory, the direct implication of training on

ESE, and the impact that training has on necessity- or opportunity-driven entrepreneurs.

Previous studies on ESE (Urban, 2006, Kickul, Wilson, Marlino & Barbosa, 2008, Díaz-García & Jiménez-Moreno, 2010, Sieger & Monsen, 2015) focused mostly on university students and practicing entrepreneurs, and less on nascent entrepreneurs. This research focused on entrepreneurs and the factors that affect the effectiveness of the training they receive once they are in business.

This research is limited by its cross-sectional nature: due to the academic scope, time, and resource constraints, the implications might bare similar results to other studies with a short-term approach; the results of the relationships between ESE and other constructs could have inconsistencies.

There are seven categories of services that BDS focuses on market access, infrastructure, policy/advocacy, input supply, training and technical assistance, technology and product development, as well as financing mechanisms. This research focused only on one intervention of BDS which is training.

1.9 Assumptions

The first assumption was that the respondents would answer the questionnaire truthfully; however, they might not feel comfortable being truthful about the impact of the training received.

It was assumed that that the respondents understand the key constructs: BDS training and entrepreneurial training, as well as the English language; all of these could have a negative impact on their ability to respond to questions accurately.

The respondents' employment status prior to starting their businesses was used to determine whether they were necessity- or opportunity-driven entrepreneurs (Block, Kohn, et al., 2015). It was therefore assumed that if they were unemployed when they started their businesses, they did it because they had no other options, implying that they were necessity-driven entrepreneurs and that if

they left their jobs in order to pursue a business opportunity that they were opportunity-driven entrepreneurs.

1.10 Structure of the report

The remainder of the report is structured as follows:

- *Chapter 2:* This is the literature review, which elaborates on the key concepts pertinent to this study. The key terms for this study are BDS training, necessity- and opportunity-driven entrepreneurship and ESE. The hypotheses are stated at the end of the literature review as possible answers to the research questions. The conceptual framework of the study is also provided.

- *Chapter 3:* This explains the research methodology used in collecting, analysing, and interpreting data. This includes the research paradigm, the limitations to the study, and the ethical considerations that govern the study.

- *Chapter 4:* In this section the results obtained from the data collected are presented. The results include the demographic profile of the respondents, their business characteristics, and descriptive statistics, which expand on the distribution, central tendency, and dispersion of the data. In addition, the validity and reliability of the measurement scales, correlation analysis of the scales with each other, and statistical assumptions required for regression analysis are given. Finally, the linear and multiple regression analysis results are shown and the hypotheses test results are presented.

- *Chapter 5:* The research results are interpreted in this section and discussed in light of the literature review.

- *Chapter 6:* The study is concluded by summarising the key findings of the study, the contribution of the study towards the literature and its practical implications are stated, and recommendations for future research are

offered. Lastly the limitations that were imposed on the study are addressed and the key findings summarised.

CHAPTER 2: LITERATURE REVIEW

This chapter is a synthesis of extant literature on the entrepreneurial theory that is relevant for this study: human capital. The chapter focuses on the constructs that help to build the argument surrounding this study, necessity- and opportunity-driven entrepreneurship, BDS, training and ESE. Drawing from the literature review, hypotheses are formulated and the conceptual framework devised. Lastly, a synopsis concludes the chapter.

2.1 Necessity- and opportunity-driven entrepreneurs

The underlying forces of entrepreneurship can be considerably different for various countries due to their specific context and level of economic development. This can be attributed to the nature and structure of the vast entrepreneurial activities taking place in a country, one of those being the volume and ratio of necessity- and opportunity-driven entrepreneurs (Acs, Desai, & Hessels, 2008). According to the authors, “the nexus between entrepreneurship, economic development and institutions” is significant in helping to understand the reasons for contributions of entrepreneurial activities varying among different countries (Acs et al., 2008, p. 220).

The classification of necessity- and opportunity-driven entrepreneurs was first conceptualised in the GEM 2001 report (Reynolds et al., 2001). The concept was uncovered when respondents participating in the report were asked to state the reason for starting and growing their businesses; they were given two options: “to take advantage of a unique market opportunity” or “because that was the best option available” (Reynolds et al., 2001, p. 4). This was to form the differentiating factor that explains the motivations behind entrepreneurs pursuing entrepreneurship. Put simply necessity-driven entrepreneurs have no other choice but to pursue entrepreneurship because it is their only means for survival, while opportunity-driven entrepreneurs take advantage of market opportunities that they have identified (Block, Sandner, & Spiegel, 2015).

These motivations bear similarities on which push and pull factors are premised. Push factors include negative factors such as redundancy, lack of career advancement, and job dissatisfaction. Pull factors, conversely, are motivations that pull you into owning a business and include motives such as autonomy, increase in earnings, and the opportunity for an individual to pursue their own ideas. As such, necessity- and opportunity-driven entrepreneurship would be a result of strong push and pull factors, respectively (Kautonen & Palmroos, 2010). Advancement in the classification of necessity- versus opportunity-driven entrepreneurs is what researchers call mixed-motivated entrepreneurs (Block, Sandner, et al., 2015). These entrepreneurs are ones who start their businesses out of both necessity- and opportunity-driven motivations (Caliendo & Kritikos, 2019); mixed-motivated entrepreneurs, however, did not fall within the scope of this study.

According to Venter and Urban (2015) the fundamental differences between necessity- and opportunity-driven entrepreneurs is found in (1) the expectation that the venture would create jobs, (2) projections that business transactions would be exported, (3) business activity being replicated from others versus creating a niche, and (4) participation in one of the business sectors. Necessity-driven entrepreneurs have characteristics that are significantly different from opportunity-driven entrepreneurs, besides the fundamental motivation for going into business, Block, Sandner et al. (2015) outlined the differentiating factors:

- *Start-up characteristics*: These include factors such as initial capital invested in the business, the age of the start-up, the amount of working hours per week that entrepreneurs devote to their businesses, whether the business is started individually or with a team, and starting a business due to unemployment at the time or because the individual left their job to pursue a market opportunity.

- *Socio-demographic characteristics*: These include gender, age, marriage status, whether the entrepreneur has children or not, wealth or income, education, leadership experience, and industry experience.

- *Personality traits*: Block, Sandner et al. (2015, p. 189) used the “big five” personality traits: extraversion, agreeableness, conscientiousness, emotional stability, and openness to change.

Policy-makers frequently encourage entrepreneurial activity as entrepreneurship is recurrently associated with innovation, job creation and economic growth, efficient resource allocation, and welfare (Kuckertz, Berger, & Mpeqa, 2016). However, not every entrepreneurial activity leads to economic growth (Baumol, 1996; Kuckertz et al., 2016). It has been proven that necessity entrepreneurship does not contribute to significant economic growth compared to opportunity entrepreneurship (Acs & Varga, 2005; Wennekers, Van Wennekers, Thurik, & Reynolds, 2005; Wong, Ho, & Autio, 2005). Necessity entrepreneurship is frequently assessed from a negative view point based the contribution that it makes to economic growth (Allen, Langowitz, & Minniti, 2007), it is also found to be more prevalent in developing countries (Arenius, Autio, & Kovalainen, 2004).

Acs et al. (2008) explained the necessity entrepreneurship and economic development relationship by stating that it is a negative relationship that is usually found in low-income countries; this implies that as economic development increases, necessity entrepreneurship decreases. The relationship between entrepreneurship and economic development in high-income countries is a positive one. The authors also contended that in the efficiency-driven stage of economic development, a stage which South Africa falls into where an economy has reached efficient production processes and product quality (Singer et al., 2018), entrepreneurial activity has a negative relationship with economic development, as most people would be more willing to leave their state of self-employment for paying jobs.

This is similar to what Kautonen and Palmroos (2010) found; necessity entrepreneurs, even if they were to be reasonably happy with their state of being employed, are generally less satisfied being self-employed and would be more than willing to switch back to paid employment. Acs et al. (2008) further discovered an apparent trend between the ratio of opportunity to necessity entrepreneurship and the countries’ income per capita. The relationship proved

to be positive, as seen in Figure 2.1, proving that countries that have more opportunity-driven entrepreneurs have higher levels of income.

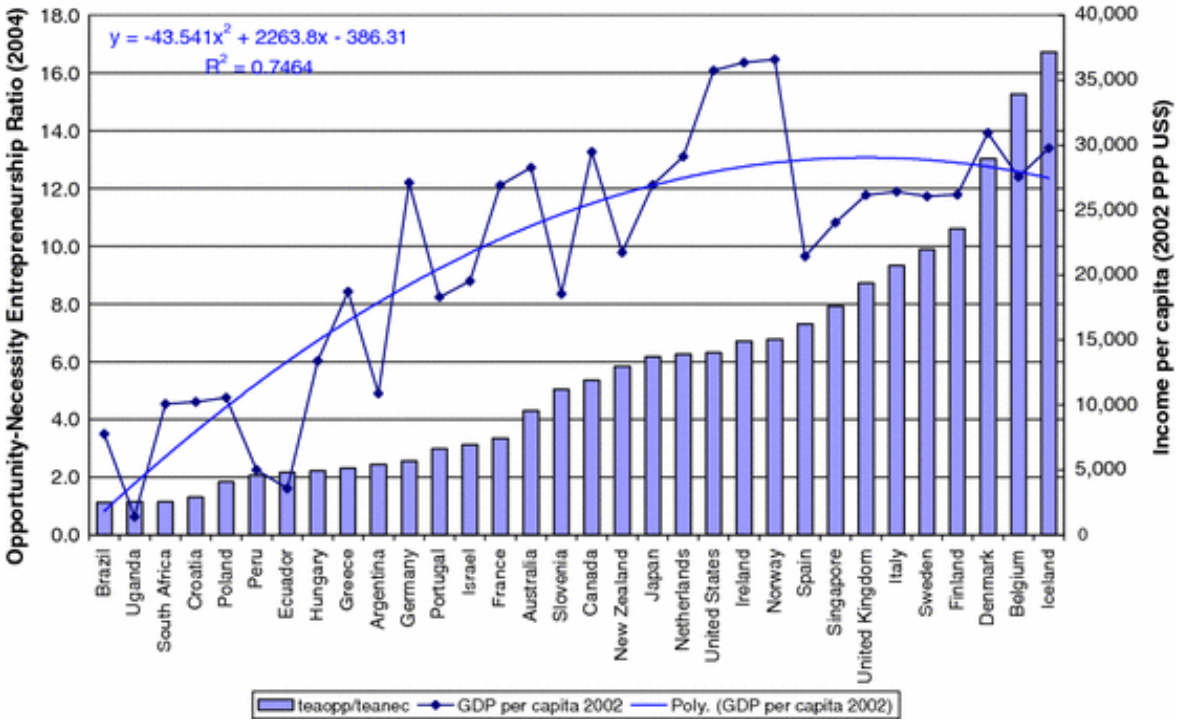


Figure 2.1: Opportunity/necessity entrepreneurship ratio and income per capita

(Acs et al., 2008, p. 224)

One of the reasons could be that individuals that possess a higher level of human capital are able to raise more capital and start new, well-equipped ventures (Colombo, Delmastro, & Grilli, 2004); they could obtain pertinent information regarding market conditions and possibly detect market opportunities that would be profitable, but are unexplored (Baptista & Karaöz, 2006). This is reinforced by Acs et al's. (2008) finding that entrepreneurship education and training, in the case of start-ups, is more useful in enhancing the entrepreneur's opportunity perception, rather than start-up skills perception.

Both opportunity perception and skills perception form part of the ESE dimensions. This provides further motivation for the research question of this study: To what extent does training have a more positive impact on the ESE of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs?

In their study on the impact of necessity-based start-ups on subsequent entrepreneurial satisfaction, Kautonen and Palmroos (2010) focused on the consequences of necessity-based start-ups in developed economies. The authors described the political climate of Finland where employers were forced to outsource their business services thereby pushing their employees to go into business due to the threat of unemployment. The economic climate of South Africa, a developing country is different; it is not the threat of unemployment that pushes individuals to go into business, but rather, the actual state of being unemployed. Besides unemployment, other factors that can cause necessity-driven entrepreneurship include stringent working conditions, stress, and uncertainty (Granger, Stanworth, & Stanworth, 1995). On the other hand, pull factors include the need for independence and opportunities for social development (Van der Zwan, Thurik, Verheul, & Hessels, 2016).

A multitude of studies have been conducted on necessity- and opportunity-driven entrepreneurs. Block and Wagner (2010) found significant differences in the human capital found between necessity- and opportunity-driven entrepreneurs. The authors discovered that opportunity-driven entrepreneurs exploit opportunities that are more profitable than those of necessity entrepreneurs, and general human capital has higher explanatory power for opportunity-driven entrepreneurs than it does for necessity-driven entrepreneurs. Opportunity-driven entrepreneurs were also found to be more willing to take risks (Block, Sandner, et al., 2015). Baptista and Karaöz (2006) found that although human capital contributes to entrepreneurial success, they found that only applies for opportunity-driven entrepreneurs. The authors suggested that the moderating effect of contextual variables be researched as they might influence the relationship between human capital and entrepreneurial success. This finding supports the motivation for this study: to determine the impact of BDS training on ESE and how the levels of ESE might differ for necessity- and opportunity-driven entrepreneurs.

In contrast, Darnihamedani and Hessels (2016) found that necessity-driven entrepreneurs with high levels of education were more likely to participate in innovative entrepreneurial tasks. Van der Zwan et al. (2016) found there to be no

significant differences in the education levels of necessity- and opportunity-driven entrepreneurs or the self-employment status of their parents. This can probably be explained by the fact that their study was based on developed European countries and Asian transition economies. The lack of difference can be explained by the ambition of transition economies to catch up with developed economies, with one of the instruments used being education (Baumol, 2005). However, the South African context is different; considering the current economic difficulties the country is facing with individuals who might find themselves unemployed, but are not necessarily characteristic of necessity-driven entrepreneurs, the study wanted to find out how education levels differentiate necessity- and opportunity-driven entrepreneurs.

In addition, opportunity-driven entrepreneurs usually start their business in partnerships, whereas necessity-driven entrepreneurs are usually the sole owners of the business (Kautonen & Palmroos, 2010); the implication is that necessity-driven entrepreneurs very often run micro enterprises, which further explains their minimal contribution to employment and economic growth. Opportunity-driven entrepreneurs are found to be more willing to take risks, whereas necessity-driven entrepreneurs are found to have a lower risk appetite and are more characteristic of non-entrepreneurs (employees) than entrepreneurs because they never wanted to be entrepreneurs in the first place (Block, Sandner, et al., 2015). This supports the need to determine the effect of BDS training on ESE and how that would differ for necessity- and opportunity-driven entrepreneurs as risk forms part of the dimensions of ESE.

Another unique characteristic that differentiates necessity- and opportunity-driven entrepreneurs is the state of employment, or unemployment, just before the launch of the new venture. Baptista and Karaöz (2006) explained that people who leave their jobs to start new businesses do so because they want to exploit an opportunity that they have discovered, and those who start their businesses because they are unemployed might not have the time to explore opportunities, develop business plans, and get sound advice. This affects the propensity of the start-up to succeed or fail. Cases where entrepreneurs bore opportunity costs (left their employment to pursue an entrepreneurial opportunity) can serve as a

determinant for the early survival of a business (Baptista, Karaöz, & Mendonça, 2014). It is this definition of necessity- and opportunity-driven entrepreneurs that was adopted by this study; the state of employment, or unemployment, just before the launch of the new venture, if unemployed before starting a business, an individual was classified as a necessity-driven entrepreneur, and if an individual was employed when they pursued a business opportunity, they were classified as an opportunity-driven entrepreneur.

2.2 Human capital theory

Many definitions of human capital are stated in previous literature. The human capital theory posits that the knowledge and skills of the individual improves their ability to be effective and efficient, and consequently enables the individual to be more successful in carrying out tasks (Becker, 1964). The definition that was adopted for this study was one from Becker (1964): human capital is the combination of the inborn abilities and the knowledge, skills, and motivations that have been acquired, which when used effectively lead to an increase in income and other benefits.

Human capital theory has been linked to entrepreneurship with particular reference to human capital attributes and their contribution to entrepreneurial success (Okeyo, Gathungu, & K'Obonyo, 2016). Davidsson and Honig (2003) contended that human capital in the entrepreneurial context has the ability to increase an individual's capabilities in creating new ventures as well as contributing to the performance of the new venture in its early stage. Unger, Rauch, Frese, and Rosenbusch (2011) reasoned that human capital should be positively associated with firm performance. According to Venkataraman and Ramanujam (1986), human capital is valuable in explaining financial performance. In addition, Ladzani and Van Vuuren (2002) contended that high quality entrepreneurship training is required to contribute to firm performance.

Human capital can be divided into general and specific human capital. General human capital means having broad knowledge and skills that are not specifically associated with any one task or company (Au, Altman, & Roussel, 2008). The

knowledge and skills are normally transferable across various jobs, firms, and industries. Specific human capital is acquired through education, training, and working experience (Au et al., 2008), increases productivity at a particular firm (Becker, 1964), and is rarely transferable to different industries (Kwon, 2009).

Human capital can be further divided into human capital investments and human capital outcomes. According to Becker (1964), knowledge and skills are the outcomes of human capital investments, such as education and work experience. As Unger et al. (2011) explained it: human capital investments include education and work experience and the outcomes of human capital investments are the knowledge and skills that are acquired. In their study of the relationship between human capital and entrepreneurial success Unger et al. (2011) found that the relationship was higher for human capital outcomes (knowledge/skills) than it was for investments in human capital (education/experience) and this especially for young businesses. This finding was influential in mapping out the research aims of this study, where the first was to determine the impact of BDS training on ESE.

Taking into consideration necessity- and opportunity-driven entrepreneurs, an interesting finding is that human capital can have an effect on the business prior to the start of the business. Baptista and Karaöz (2006) found that entrepreneurs forced into self-employment are usually those that have few human capital resources, they go into self-employment because they have no other option for survival, and those that pay the opportunity cost of leaving their current employment with the intention of starting new businesses, do so because they discovered a promising business opportunity and want to exploit that market opportunity. According to the authors, if an individual goes into business from a state of unemployment, that classifies them as necessity-driven entrepreneurs, and one of the implications is that they might not have time to discover or pursue good business opportunities, develop detailed plans on how to pursue that opportunity, and seek advice. Baptista and Karaöz (2006) further stated that it can be assumed that individuals that leave their jobs do so to pursue a business opportunity, versus the individual that was previously unemployed, who could be pursuing a business opportunity because they have no other option.

It is often stated that opportunity-driven entrepreneurs usually run businesses that have a propensity to grow and contribute to economic growth (Acs et al., 2008); perhaps this statement can be substantiated by the finding that entrepreneurial human capital influences the likelihood or survival of a business (Baptista & Karaöz, 2006). However, having pre-knowledge that determines the early-survival of a business is a finding that only applies in the case of entrepreneurs that bore the opportunity cost of leaving their jobs to pursue a business opportunity (Baptista et al., 2014).

Another relevant finding is that general human capital, such as education, has a high explanatory power for opportunity-driven entrepreneurs, whereas specific human capital, such as being educated in the field pursued by the entrepreneur, is more effective for necessity-driven entrepreneurs (Block & Wagner, 2010).

2.3 Human capital training

Training has been found to be an essential tool that can contribute to the effectiveness of the entrepreneur and to the success and efficiency of the organisation (Afolabi & Macheke, 2012). According to Radipere and Van Scheers (2005), managerial skills can also be improved through training. Similarly, ESE is found to be a learned competence (McGee & Peterson, 2019). Such as the recommendation by Wood and Bandura (1989), numerous studies have found that ESE can be raised through observations, mentorship, prior experience, training, and education (Florin, Karri, & Rossiter, 2007; Mueller & Goic, 2002; Zhao, Seibert, & Hills, 2005). It is deduced that ESE can be improved, and therefore this research wanted to build on that finding by contributing to extant literature in the South African context by determining the impact of BDS training on ESE and how much the ESE differs between necessity- and opportunity-driven entrepreneurs.

Mudavanhu, Mubata, and Mudavanhu (2014) defined training as a process where knowledge, skills, and behaviour empower individuals to perform their current and future jobs. The authors further explained it is a learning activity that facilitates the acquiring of knowledge and skills that are specific requirements in

a job or a task. Kimando, Sakwa, and Njogu (2012) defined training as an action of teaching an individual a skill or behaviour. Training is aimed at conveying information and instructions that improve the individual's performance and help them to acquire the necessary level of knowledge and skills.

A number of studies revealed the lack of management skills as one of the major reasons why businesses fail (Mudavanhu et al., 2014; Rogerson, 2008); although McGrath (2005) does caution that that is not the only, nor even the main challenge that small businesses have. Researchers such as Baughn, Cao, Le, Lim, and Neupert (2006), and Wilson et al. (2007) suggested that education and training be used as an intervention to increase an individual's ESE. The findings by McGee et al. (2009) suggested that entrepreneurship education and training programmes take the multidimensional nature of entrepreneurial tasks into account. The authors thereby developed an ESE scale based on the four stages of new venture creation (searching, planning, marshalling, and implementing both people and financial), and found that the searching dimension of ESE proved to have a stronger correlation with nascent entrepreneurship than the other dimensions of ESE. This inspired this study to follow in a similar manner by determining the impact of training on the individual dimension of ESE on necessity- and opportunity-driven entrepreneurs with the aim of determining which dimension of ESE was more important for which type of entrepreneur.

As a result of the view that entrepreneurs can be made, training is seen as the bridge that can assist managers in their objectives to grow their businesses. Bruwer and Smith (2018) asserted that it could be inferred that if business skills are developed in South Africa, it would have a positive influence on the realisation of business objectives. Lucas and Cooper (2004), and Peterman and Kennedy (2003) found that entrepreneurial training programmes improved ESE. However, not all studies have found training to be effective. Citing the reason as the lack of proper entrepreneurship training programmes, Mudavanhu et al. (2014) concluded that entrepreneurship training programmes were ineffective.

Table 2.1 synthesises the areas that previous literature has proposed training programmes focus on and the similarities and differences can be clearly seen.

Afolabi and Macheke (2012) recommended business linkages, business systems, communication, computer literacy, and financial management as the most important business skills that should be integrated into all the training programmes that entrepreneurs should undergo. In terms of entrepreneurial skills, leadership, creativity, and innovativeness were the skills that the authors found to be the most important. The authors recommend that both these areas of skills should be a focal area in every stage of the entrepreneurial process.

Table 2.1: Summary of skills focus

Author(s)	Focal entrepreneurial phenomenon	Relationship between entrepreneurship phenomenon (training) and SMME performance	Key skills
Afolabi and Macheke (2012)	Entrepreneurial, skills, business skills and training needs	Training is an effective tool for determining organisational success, effectiveness and efficiency	Business linkages Business systems Communication Computer literacy Financial management
Botha et al. (2015)	Entrepreneurial performance model	Established SMMEs regard functional competencies as more important than what start-ups do.	Motivation Securing resources Operations Financial management Legal skills Marketing
Brijlal (2008)	BDS	(not mentioned)	Financial skills, Business management skills Ability to see opportunities Technical skills
Bruwer and Smith (2018)	Basic business skills development	Basic business skills possessed by management had an influence in the ability of SMMEs to reach their organizational goals	Administration skills Mathematical skills Research skills Writing skills Time management skills
Ladzani and Van Vuuren (2002)	Entrepreneurial training	Entrepreneurial performance is a multiplicative function of motivational skills times	Motivational skills Business skills

Author(s)	Focal entrepreneurial phenomenon	Relationship between entrepreneurship phenomenon (training) and SMME performance	Key skills
		entrepreneurial skills and business skills	Entrepreneurial skills
Tambwe (2015)	Entrepreneurial training	Proper entrepreneurial training leads to successful performance SMMEs	Management skills Marketing skills Financial skills
Radipere and Van Scheers (2005)	Business skills	Lack of marketing and financial skills have a negative impact on the success, viability and development of small businesses	Administration, Financial management Marketing management skills
Loué and Baronet (2012)	A framework for addressing entrepreneurial skills	(not mentioned)	Opportunity recognition Financial management Human resource management Marketing and commercial activities Leadership Self-discipline Marketing and monitoring Intuition and vision

Bruwer and Smith (2018) advocated that even though there is a desperate need for business skills to be developed, some skills were found to be more important due to the direct positive influence that they have in helping organisations to achieve their objectives. Brijlal (2008) found financial skills, business management skills, the ability to see opportunities in the market, and technical skills as the skills that were the most commonly needed by emerging and established entrepreneurs. According to Radipere and Van Scheers (2005), without administration, financial management, and marketing management skills, businesses would not be able to develop, be viable, and succeed. Ladzani and Van Vuuren (2002) posited that training be a regular occurrence for entrepreneurs and that the areas of training should include motivational, business, and entrepreneurial skills. According to the authors, institutions that focus on only one of the three functions in isolation do a disservice to

entrepreneurs as they believe that the three areas of skills to be like a three-legged pot, which will not stand with any of its legs missing.

To answer the question of how training can improve entrepreneurial success, the authors posited a model that infers entrepreneurial training (ET) is equal to motivation (M) times business skills (BS) and entrepreneurial skills (ES):

$$ET = M \times (BS + ES)$$

According to the equation, the three areas of skills combined have a multiplicative effect.

Botha et al. (2015) found similar results when they conducted a synthesis of the different types of entrepreneurial performance models derived by various authors; they found that the majority of models consist of motivation, entrepreneurial skills, and business skills as the most important elements that improve entrepreneurial performance. As a result, the authors conducted a study on the key skills that should be included in training programmes. Two interdependent and complementary areas of skills, functional (business) skills and enterprising (entrepreneurial) skills, were identified as skills entrepreneurs need to succeed; between the two skills, entrepreneurs running established businesses regarded business skills as more important than did start-up businesses. Enterprising skills were defined as skills that helped with the development of a business and included motivational and entrepreneurial skills. Functional competencies are those that help the entrepreneur to function in the business and include business management, general management, and technical skills. The authors' recommendation was that training focus on the skills that established businesses found to be the most important to them. The top five key business and entrepreneurial skills that Botha et al. (2015) found to be the most important for entrepreneurs are found in Table 2.2.

Table 2.2: Key business and entrepreneurial skills

Key Business Skills	Key Entrepreneurial Skills
Marketing management skills	Ability to gather and control resources
Financial management skills	(Motivation) Need for achievement
Operational skills	Creativity
Legal skills	Innovation
General management	Role model interpretation

2.4 Business Development Services (BDS)

BDS are defined as services that are targeted at improving the performance of firms, their access to markets as well as improving their ability to compete within both strategic and operational spheres (Pinto, 2004). BDS were previously known as non-financial services and their scope has evolved over time to include a wide assortment of services intended for entrepreneurs to maximise on the efficiencies of their businesses as well as to help them grow (Miehlbradt & McVay, 2003).

There are two sides to the delivery of BDS, namely supply and demand sides. The supply side involves the organisations that provide BDS, the various services they supply as well as the how they provide those services to businesses. The demand side is concerned with the types of BDS that businesses need, how they contract the BDS, as well as the benefits that they derive from the BDS (McVay & Miehlbradt, 2002; Okeyo et al., 2014). BDS are deemed an essential catalyst for entrepreneurs due to their core function of assisting them to reach common goals of contributing to economic growth, generating employment, and reducing poverty (Miehlbradt & McVay, 2003; Pinto, 2004). BDS are, however, not without their own challenges: the value that they provide is yet to be empirically established and they tend to become unsustainable as soon as donor funding is terminated (Pinto, 2004).

BDS have two approaches through which they can be delivered: the traditional development (TD) approach and the market development (MD) approach. In the TD approach, non-profit organisations are formulated to provide BDS directly to businesses. The driving force of this approach is that public subsidies play a role in providing BDS at no or very little cost. The major challenge with this approach is that BDS providers who deliver these services are not financially sustainable; as soon as the subsidies are withdrawn, the BDS providers no longer have funds with which to operate (Pinto, 2004).

The MD approach was derived as a response to the poor delivery of services, insufficient outreach of businesses and lack of sustainability through the TD approach (Pinto, 2004). Delivery of BDS in the MD approach sought to replace subsidised services by stimulating demand and supply of BDS by enabling businesses to purchase services of their own choosing from a wide choice of products offered through as many BDS providers as possible (Pinto, 2004). Because of the 'perfect competition' approach of the MD approach, the major challenge of this approach is that businesses in impoverished areas fail to benefit from BDS due to their inability to afford the services. However, it is yet to be determined whether the MD approach is indeed more effective than the TD approach (Pinto, 2004). As a result, Brijlal (2008) suggested a new way for the delivery of BDS, which should include identifying the specific needs of the entrepreneurs and their businesses, considering their degree of sophistication, and thereby supplying services that will cater to those unmet needs.

Past studies on BDS and their impact on businesses have proven it to be effective in assisting entrepreneurs to reach their organisational goals. In their study aimed at establishing how access to market, procurement services, and infrastructure facilities affect the performance of businesses, Okeyo et al. (2014) established that the three variables mutually affect the performance of businesses in Kenya. Mazanai and Fatoki (2011) found that most start-up businesses were not aware of BDS and that of those that were aware and used the services; the programme assisted them in improving their access to debt finance. With the role of decreasing the gap between small businesses and large businesses, Akhmad, Karsidi, Rahayu, and Wijaya (2018) found that BDS training and facilitation

services were capable of lessening the gap in terms of productivity, accessing markets, information, technology, and access to funding.

However, a few studies have found the effects of BDS to be inconclusive or to some degree ineffective, such as the study by Ombi, Ambad, and Bujang (2018), which found non-financial service by BDS to have no impact on business performance. BDS are also not without their challenges, one of the major challenges being the lack of confidence of the market in the effectiveness of BDS, as well as the acceptance of the contribution that they can make. Goyal et al. (2018) made mention of four types of factors: lack of awareness, accessibility, a know-it-all attitude, and price sensitivity to the services offered. In his study, Brijlal (2008) found that only 32 per cent of his sample of businesses knew about BDS. Fatoki and Garwe (2010) found similar challenges and suggested that BDS providers should be rigorous in creating an awareness of their existence.

A need exists for literature that "focuses on theorising BDS and business relationships across multiple dimensions" (Goyal et al., 2018, p. 314). Okeyo et al. (2016) proposed that the impact and effectiveness of BDS on business performance has yet to be tested empirically.

According to the Small Business Development of the International Labour organisation, there are seven BDS categories: market access, infrastructure, policy/advocacy, input supply, training and technical assistance, technology and product development, and alternative financing mechanisms (Goyal et al., 2018; Miehlbradt & McVay, 2003). These functions are intended to enable the transfer of business skills to small firms who do not have the capacity to incorporate those services into their business practices. This study focused on only one dimension of BDS which is training. There is a gap in extant literature that focuses on BDS training and its impact on the entrepreneur; as the entrepreneur is the driver of entrepreneurship, this study focused on BDS training, from the demand side of the market development approach, specifically the impact and benefits that accrue to the entrepreneur.

2.5 Social Cognitive Theory

The catalyst that causes the entrepreneurial activity cycle is the “psychological predisposition of the entrepreneurs (Churchill & Bygrave, 1990). Social cognitive theory, which is embedded in psychology, is “founded on a causal model of triadic reciprocal causation in which personal factors in the form of cognitive, affective and biological events, behavioural patterns, and environmental events all operate as interacting determinants that influence one another bidirectionally”. Within the social cognitive theory is human agency which is entrenched in a self-theory consisting of self-organising, proactive, self-reflective and self-regulative mechanisms (Bandura, 1999a, 1999b; Liguori, Bendickson, & McDowell, 2018).

In trying to understand the role of the individual in entrepreneurship and in particular, venture creation, entrepreneurship is usually said to be linked with human agency where agency means being intentional about making things happen through the choices that one makes (Barreira, Botha, Oosthuizen, & Urban, 2016). Being an agent means that people play a determinative role, i.e. an active role as operators in their life course, they are not just merely being passive about the effects of environmental events in their lives. These cognitive processes are not only brain activities but rather also exert a determinative influence (Bandura, 1999b).

In conceptualising social cognitive theory, human agency is said to be employed through personal agency, through proxy agency where the agent relies on the efforts and actions of others and by collective agency through shared beliefs of efficacy, joint understandings, group ambitions and incentive systems, and co-operative action (Liguori et al., 2018)

The study of human behaviour is often rationalised through unidirectional causation where behaviour is portrayed as either being organised and moulded by environmental influences or where it is determined by internal dispositions, however, social cognitive theory explains this functioning through triadic reciprocal causation (Bandura, 2001). In this psychosocial model of reciprocal causality, internal personal factors in the form of cognitive, affective and

biological events, behavioural patterns and environmental events all operate and interact as determinants that influence each other bidirectionally (Bandura, 1999b; Wang, Hung, & Huang, 2019).

The social learning theory of Bandura established that the environment causes behaviour, but that behaviour also cause the environment, this is called reciprocal determinism where the behaviour of people and the world are mutually caused (Bayrón, 2013). As Harinie, Sudiro, Rahayu, and Fatchan (2017) state: behaviour can affect cognitive, cognitive can affect the environment, the environment can influence individual thought processes and vice versa. In this regard, the environment is not monolithic, there are three types of environmental structures that can be distinguished, these are the imposed environment, the selected environment and the constructed environment, with the exertion of personal agency, these environments possess a degree of interchangeability (Bandura, 1999b).

The imposed environment is forced onto people whether they like it or not, and although they cannot control its presence, they have agency in how they react to it and thus rewards or punishing aspects of the environment do not come into existence until the environment is selected and activated by appropriate actions. On the other hand, the part of the potential environment which becomes the actual experienced environment depends on the behaviour of people. Their choice of activities therefore represents the selected environment. That is to say that people construct social environments through their procreative efforts and that the choice of environments, whether imposed, selected or constructed, as an interplay between personal, behavioural and environmental factors. (Bandura, 1999b).

Social cognitive theory examines social diffusion of new styles of behaviour using three components. The first includes how knowledge is acquired and serves new innovations and how they are adopted and dispersed. The second function includes adoption determinants which include among other components perceived self-efficacy in mastering the competencies, having the required resources and outcome expectations. The third subfunction concerns social

networks (Bandura, 1999b, 2001). The second is of particular interest in this study as it houses the behavioural patterns of knowledge in self-efficacy. Self-efficacy is embedded in human agency and states that people can produce their desired results through the actions that they take. Notwithstanding other factors that can serve as motivators, they are rooted in believing that one has the power to cause change through the actions that one takes (Bandura, 1999b).

Self-efficacy plays an essential role in social cognitive theory because it not only affects the action one takes directly but also has the power to impact other determinants as well. One can exercise self-influence through goal setting and the ability to evaluate ones actions based on the goal that has been set provides a cognitive mechanism of motivation and self-directedness (Bandura, 1999b), in other words the self-efficacy construct influences an individual's choice of activities, goal levels, persistence, and performance in multitude of contexts (Bayrón, 2013). The other is the role that perceived self-efficacy plays as an influential role in motivation through outcome expectations. In this view, motivation is the product of the expectation that a given action will produce desired outcomes. In other words people act on their beliefs about what they can do as well as their beliefs about the likely outcomes that they can expect from their actions. (Bandura, 1999b; Drnovšek, Wincent, & Cardon, 2010).

To summarize, social cognitive theory states that people are capable of shaping their own behaviour and are thus responsible also for their actions (Goldsby, Kuratko, Hornsby, Houghton, & Neck, 2006). Social cognitive theory explains that perceived self-efficacy can be influenced through four sources: mastery experiences, vicarious experience, social persuasion and judgements of one's physiological state (Bayrón, 2013).

In the following section, self-efficacy is expounded on and a distinction is drawn between General Self Efficacy (GSE) and Entrepreneurial Self-Efficacy (ESE).

2.6 Entrepreneurial Self-Efficacy (ESE)

The study of self-efficacy within the entrepreneurship field is growing and much of the focus has been on the intentions of the individual to launch a new venture (McGee et al., 2009). The predispositions of entrepreneurs have long been studied in academic literature and with that the development of the profiles of successful and unsuccessful entrepreneurs. According to studies there are five attributes of entrepreneurial profiles: self-efficacy, need for achievement, locus of control, need for autonomy, and risk-taking, these attributes are known to affect "individual behaviour and performance in various occupational settings, including entrepreneurship" (Venter & Urban, 2015, p. 68).

Self-efficacy is the capabilities that an individual estimate they possess with regard to the "motivation, cognitive resources and courses of action needed to exercise control over events in their lives" (Wood & Bandura, 1989, p. 364). Boyd and Vozikis (1994, p. 67) believed that self-efficacy can be strengthened through (1) "mastery experiences": experience in overcoming obstacles through perseverance, (2) "modelling": observing what others achieve through social comparison, (3) "social persuasion": receiving encouragements from others, and (4) judging your psychological state in assessing your capabilities.

Self-efficacy also affects an individual's choice of activities and environments. One of the major inferences of self-efficacy is that individuals avoid the activities and situations that they believe their capabilities will not exceed and take on challenges and environments in which they believe they can manage (Wood & Bandura, 1989). This has a direct impact on an individual's career choice: when choosing a career path an individual will measure their own capabilities against the requirements of different occupations. This will lead an individual to go for career choices that they believe they would be able to do and hence avoid those career choices that they believe they will not be able to do (Chen et al., 1998).

An individual's level of self-efficacy also determines the level of motivation they have (Wood & Bandura, 1989). This implies that an individual with a high level of self-efficacy will be more likely to exert extra effort in the tasks they have to

complete and be inclined to persevere more readily. This means that the stronger an individual's belief in capabilities, the more persistent the effort will be; therefore, self-efficacy can be used to predict future performance (Chen et al., 1998).

It has been long argued that self-efficacy needs to be measured in context with the environment within which it is found. Mauer et al. (2017) stated that self-efficacy can only be expressed by contextual factors. The authors identified two drivers that spurred the interest in self-efficacy in entrepreneurship literature. According to the authors, there is a need to produce more entrepreneurs due to the positive economic contribution that they make. Second, entrepreneurship as a field has struggled to produce personality traits that are unique to entrepreneurship. As Barreira, Botha, Oosthuizen, and Urban (2016, p. 139) stated, "Entrepreneurship can only be understood as a constellation of personality features of which self-efficacy is only part". There are four other dimensions which form part of the personality, which if researched together could form a better study. Due to time and resource constraints only self-efficacy was the focus in this study. Bandura (1977) and other authors contended that self-efficacy should be looked at as a construct within a specific context and area of specialisation, hence the focus on entrepreneurship and the development of ESE.

ESE is the strength of an individual's belief in their capability to successfully execute the tasks and roles that are prevalent in entrepreneurship (Chen et al., 1998). McGee et al. (2009) recognised it as a construct that measures an individual's ability to launch a new venture. The authors also stated that individuals with high ESE consider the environment as full of opportunities rather than as risky, individuals believe that they have the ability to achieve goals and perceive there to be very little probability of failure. As much as self-efficacy can sustain the motivation of the entrepreneur, according to Venter and Urban (2015), self-efficacy alone will not produce ideal performances if task-specific sub-skills are lacking.

McGee et al. (2009) proposed that future research on ESE should focus on moderating factors such as (1) the different stages of venture development, (2) the goals of entrepreneurs in terms of growth, and (3) cultural factors that can influence ESE. This study focused on the entrepreneur by looking at how BDS training could impact the ESE of the entrepreneur.

This research responded to the call by McGee et al. (2009) to focus on the multidimensionality of ESE. The study did so by determining the impact of the different dimensions of ESE individually and measuring the differences in effect between necessity- and opportunity-driven entrepreneurs. It has been proven in past research that an individual's ESE can be raised by means of education and training (Mueller & Goic, 2002; Zhao et al., 2005), and according to Chen et al. (1998), ESE can be diagnosed on current entrepreneurs, this validates the context and purpose of this study which was to determine the impact of BDS training on the ESE of necessity- and opportunity-driven entrepreneurs that have operative businesses. Knowing how differently the training affects ESE for necessity- and opportunity-driven entrepreneurs will help to improve entrepreneurial training programmes.

McGee and Peterson (2019) argued that there are three challenges that reflect on ESE. First, there is a disagreement on whether general self-efficacy (GSE) is more appropriate than ESE. Second, past researchers have not been consistent with the way in which ESE has been measured. Third, researchers on ESE have mainly been collecting data from students and practicing entrepreneurs, whereas self-efficacy precedes entrepreneurial intention. In response to the challenges presented, first, this study took on the ESE construct, rather than GSE, this study fell within the entrepreneurial context and aimed to make a theoretical contribution to entrepreneurship, specifically the South African context. Necessity-driven entrepreneurs dominate the South African entrepreneurial landscape and in assisting them to understand their dispositions better, and as characteristic of ESE, assisting them to believe in their entrepreneurial capabilities, this study simultaneously contributed practically towards entrepreneurial activities that could contribute to economic growth. Second, this research chose to focus on the measurement scale by Chen et al. (1998) as

previously stated, it contains both entrepreneurial and managerial tasks that Botha et al. (2015) identified as being the most important for businesses in South Africa. Third, as a result of so many necessity-driven entrepreneurs that find themselves having to go into business because they do not have any other options of making a living, together with the South African entrepreneurial landscape and that of many other developing countries, businesses fail within their first three years of operation (Mazanai & Fatoki, 2012), it was therefore pertinent to focus on practising entrepreneurs.

To further support this study's argument, the research done by McGee and Peterson (2019) on the long-term impact of ESE and entrepreneurial orientation (EO), shows that both ESE and EO positively affect firm performance, but that ESE proved to be beneficial particularly to young firms, whereas EO at the infancy stage of a business did not have any effect, but became valuable as the young firms matured. This finding is fundamental in supporting the motivation for this study; ESE is relevant for entrepreneurs as their level of ESE has direct impact on their firm's survival. In addition, most of the research on ESE has focused on entrepreneurial intentions to launch a business (Chen et al., 1998; McGee et al., 2009; Zhao et al., 2005); however, research on the subsequent impact of ESE after the business has been launched is growing. The standpoint of this research was from a necessity- versus opportunity-driven entrepreneurship within the South African context, where entrepreneurs had already started their businesses.

Some of the extant literature on ESE includes a study by Forbes (2005), which reported that entrepreneurs with high levels of self-efficacy, those who are confident about their entrepreneurial abilities, are able to make better strategic decisions and come up with better strategic plans for their businesses. Baum and Locke (2004) and Hmieleski and Baron (2008) proved that self-efficacy can lead to firm growth. Baum and Locke (2004) found that goals, self-efficacy and communicating the vision of the company had a direct impact on venture growth. Hmieleski and Baron (2008) found that ESE was effective when entrepreneurs were in dynamic environments and that moderate optimism moderated that

effect. The results proved to be negative in stable environments, proving that having a high self-efficacy can also have negative effects.

Urban (2012a) found that within the venture creation phases, ESE pertaining to searching, planning, marshalling resources, implementing people, and attitudes towards venturing significantly contributed to the competitiveness of the venture, however no statistically significant relationship was found between ESE for implementing finances and competitiveness. Urban (2012a) suggested that this means that the respondents lack the belief that they can conduct financial management duties, as financial management has been listed as one of the skills that are lacking and which hinder entrepreneurial success in South Africa. However, McGee and Peterson (2019) were of the opinion that the results by Urban (2012a) are reflective of the role that ESE plays in the venture start-up process, The findings by McGee and Peterson (2019) further support and build on that, as the progressive results of ESE start to diminish after the venture has been founded; therefore, the importance of introducing EO in the early stages of the growth of the venture. It seems that this further emphasises the importance of ESE especially in the early years of a business. Businesses in South Africa struggle to make it to the established business phase, where they have been operational for 42 months and more (Singer et al., 2018); therefore, this study could be instrumental in further enlightening entrepreneurs on the necessary disposition needed to growth from the survival phase to the established phase.

Various authors have used different constructs to measure ESE, as can be seen in Table 2.3. ESE was first defined by Chen et al. (1998) as a combination of a task-specific psychological concept and the tasks that form part of the entrepreneurial process (Mauer et al., 2017). The authors found that ESE was a distinctively entrepreneurial characteristic which differentiated entrepreneurs from non-entrepreneurs. The authors measured it according to five factors: marketing, innovation, management, risk-taking, and financial control; of the five factors only two were found to be uniquely entrepreneurial, the other factors were more managerial but were however found to be just as important highlighting the complex nature of entrepreneurship.

De Noble, Jung, and Ehrlich (1999) also designed their own ESE measuring scale inspired by their criticism that the dimensions by Chen et al. (1998) were not entirely entrepreneurial. Their scale included the constructs: new product development or market opportunities, building an innovative environment, initiating relationships with investors, defining the core purpose of the venture, coping with unexpected challenges, and developing human resources. The ESE dimensions by McGee et al. (2009) proved to be unique in that they captured ESE in the different phases of the new venture development process and included: searching, marshalling, planning, implementing people, implementing financial, and attitude towards venturing. The study by Chen et al. (1998) found that students who were studying entrepreneurship had higher self-efficacy than students who were studying psychology. This study wanted to determine if developing the ESE of active entrepreneurs through training would result in different ESE levels for necessity and opportunity-driven entrepreneurs.

Although Newman, Obschonka, Schwarz, Cohen, and Nielsen (2019) made a recommendation that the ESE measurement scale by De Noble et al. (1999) or McGee et al. (2009) be used, as it is an improvement on the original ESE scale by Chen et al. (1998), the measurement scale by Chen et al. (1998) was used, regardless of the criticism that it is not exclusively entrepreneurial as it measures business skills and entrepreneurial skills. The skills that the measurement scale is criticised for are the precise skills which Botha et al. (2015) identified as critical. First, their study found that entrepreneurs running businesses that have reached the established business phase in South Africa regarded them to be the most important, and second, because a lack of management skills has been cited as one of the major reasons why businesses in South Africa fail (Mudavanhu et al., 2014; Rogerson, 2008). The measurement scale by Chen et al. (1998), which includes both entrepreneurial and management skills, seemed more appropriate for this study and the South African context within which it was based.

Table 2.3: ESE dimensions

Author	ESE Dimensions
Anna, Chandler, Jansen, and Mero (2000)	Opportunity recognition Formal planning Economic management Human competence
Barbosa, Gerhardt, and Kickul (2007)	Opportunity identification SE Relationship SE Managerial SE Tolerance SE
Chen et al. (1998)	Marketing Innovation Management Risk-taking Financial control
De Noble et al. (1999)	Developing new product or market opportunities Building and innovative environment Initiating investor relationships Defining core purpose Coping with unexpected challenges Developing critical human resources
McGee et al. (2009), Urban (2012a)	Searching Planning Marshalling Implementing people Implementing financial Attitude towards venturing
Zhao et.al. (2005) Sardeshmukh and Corbett (2008)	Identifying new business opportunities Creating new products Thinking creatively Commercialising an idea or a new development

Author	ESE Dimensions
Wilson et al. (2007)	Ability to solve problems Decision making Managing money Being creative Getting people to agree with you Being a leader

2.7 Hypothesis and Conceptual Framework

According to Kangasharju (2000), business success can be credited to the abilities and skills that the owner/manager uses in trying to guide the business into succeeding. In order for a firm to thrive, the entrepreneur needs to manage it well while also gathering the necessary resources used to drive the business towards growth. Akhmad et al. (2018) stated that the challenges that businesses face need solutions that will assist them to develop, survive, and compete in the market. It is their belief that BDS can play a pivotal part in providing those solutions thereby empowering them to be strong and successful. Shifting the focus onto the entrepreneur and taking into consideration the theoretical background that was discussed, as well as the empirical connections on necessity- and opportunity-driven entrepreneurs, BDS training and the multi-dimensional nature of ESE, the following hypotheses and sub-hypotheses were proposed:

Hypothesis 1: Training has a more positive impact on the ESE of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.

- *H1a:* Marketing training has a more positive impact on the ESE marketing of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.
- *H1b:* Innovation training has a more positive impact on the ESE innovation of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.

- *H1c:* Management Training has more a positive impact on the ESE management of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.

- *H1d:* Risk-taking training has a more positive impact on the ESE risk-taking of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.

- *H1e:* Financial control training has a more positive impact on the ESE financial control of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.

The second hypothesis is as follows:

Hypothesis 2: The ESE of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.

- *H2a:* The ESE marketing of opportunity-driven entrepreneurs is higher that of necessity-driven entrepreneurs.

- *H2b:* The ESE innovation of opportunity-driven entrepreneurs is higher that of necessity-driven entrepreneurs.

- *H2c:* The ESE management of opportunity-driven entrepreneurs is higher that of necessity-driven entrepreneurs.

- *H2d:* The ESE risk-taking of opportunity-driven entrepreneurs is higher that of necessity-driven entrepreneurs.

- *H2e:* The ESE financial control of opportunity-driven entrepreneurs is higher that of necessity-driven entrepreneurs.

Proceeding from the theoretical foundation, the literature review that was deliberated and the hypotheses that were proposed, a conceptual framework that explains whether BDS training has a higher impact on the ESE of opportunity-driven than necessity-driven entrepreneurs is depicted in Figure 2.2.

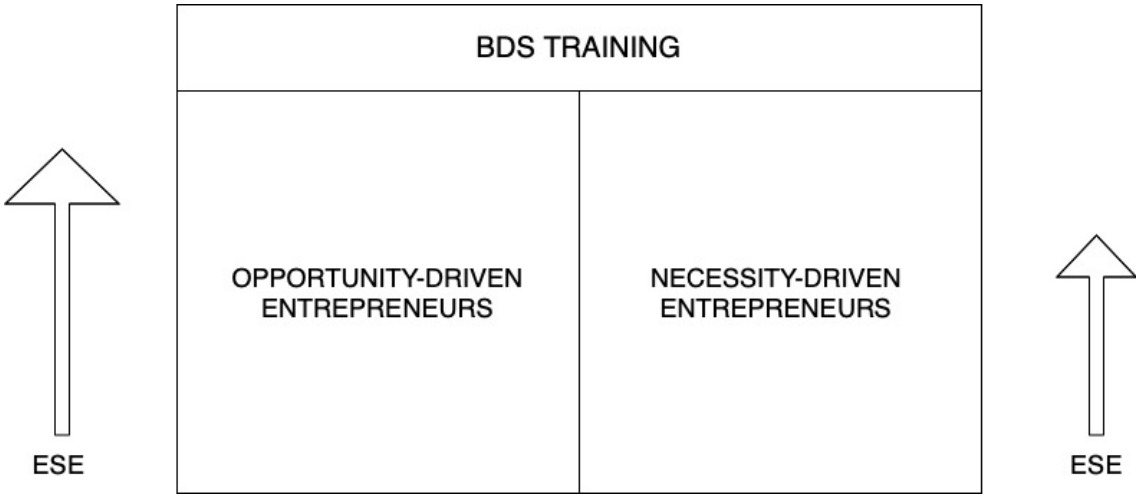


Figure 2.2: H1conceptual framework

Adapted from Baptista and Karaöz (2006), and Chen et al. (1998).

Drawing from the literature and the superior empirical results that have been found in opportunity-driven entrepreneurs, the second hypothesis is therefore that the ESE levels of opportunity-driven entrepreneurs will be higher than that of necessity-driven entrepreneurs. Figure 2.3 depicts Hypothesis 2.

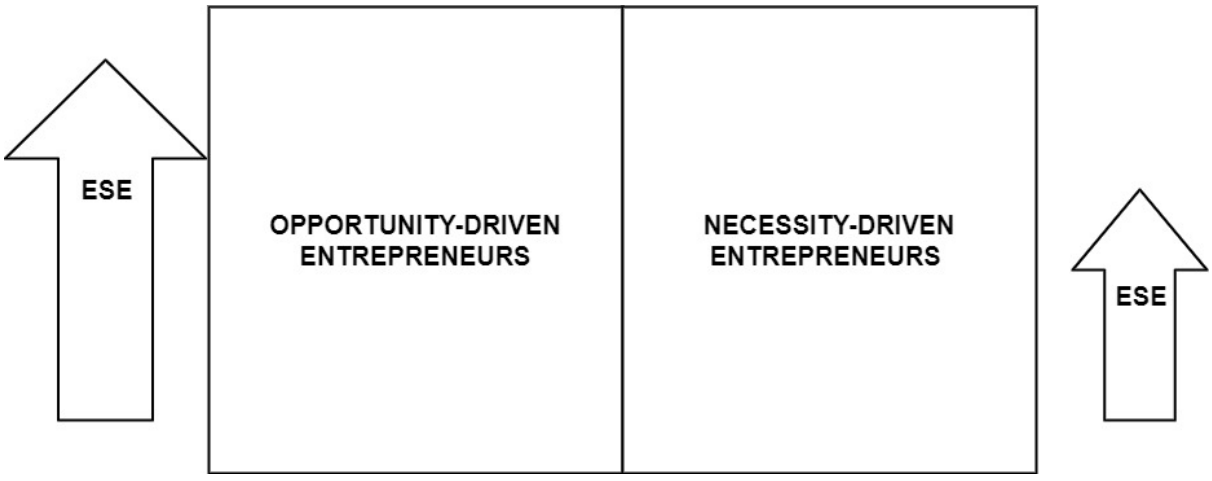


Figure 2.3: H2 conceptual framework

Adapted from Baptista and Karaöz (2006), and Chen et al. (1998).

2.8 Conclusion

This chapter explored extant literature on the constructs pertaining to this study: necessity- and opportunity-driven entrepreneurs, human capital theory, BDS, and ESE. The chapter ended with the hypotheses and a depiction of the conceptual framework.

CHAPTER 3: RESEARCH METHODOLOGY

The aim of this chapter is to describe in detail, the research methodology that was used to address the research questions and hypotheses of this study. The section includes the research design, data collection and sampling, the research instruments, data analysis, and ethical considerations applicable.

3.1 Research approach and design

This research was of a quantitative nature which is a scientific method that is grounded in the positivist paradigm (Rahi, 2017). Questionnaires made up of closed questions were used to gather the data and statistical analysis was applied to analyse the data. The positivist research paradigm, generally used to test hypotheses and theories, is useful in social sciences, especially where the sample sizes used are very large (Taylor & Medina, 2011), and the study analyses the relationship of variables and constructs (Cohen, Morrison, & Manion, 2013). This study had a very large sample size and the hypotheses, and relationship of the variables that were analysed were BDS training (referred to as training) as the independent variable (IV), and the ESE of necessity- and opportunity-driven entrepreneurs as the dependent variables (DV).

The key assumptions for the positivist paradigm are that the researcher is separate from the object of the research. The object of this study was the entrepreneur; the research was conducted from an objective perspective with efforts to remove all bias from the research; reality existed independently of the researcher; the research made use of empirical data; and the research tested for validity and reliability (Weber, 2004). All of the assumptions of the positivist research paradigm applied to this study. The aim of this research was to determine the impact of BDS training on the ESE of necessity- and opportunity-driven entrepreneurs. A positivist research paradigm was appropriate for this study because the research took on an objective focus, the research made use of exploratory factor analysis (EFA) and Cronbach's alpha to test for validity and

reliability, and empirical evidence was used to deduce the research claims (Creswell & Creswell, 2017).

This study was conducted to fulfil the requirements of a Master of Management degree. The degree is a one year, full-time degree and due to the time limit and scope the research took on a cross-sectional methodological approach as it captures a particular point in time (Cooper & Schindler, 2014).

Online, self-administered, questionnaires were distributed to collect primary data. The questionnaires were distributed using online software called Qualtrics, where a link was sent to entrepreneurs who had received BDS training. The advantage of having used cross-sectional quantitative data collected by distributing online questionnaires using Qualtrics was that the online software allowed the researcher to design the research instrument and easily distribute it, and collect the data and transfer it to SPSS, which was used to analyse the data (Bhattacherjee, 2012). The research also needed to be conducted in a short amount of time, within the prescribed scope necessary to complete a Master's Degree, and cross-sectional methodology with quantitative data allowed for that. The disadvantage of using cross-sectional data was that this research went against the chorus of calls for longitudinal data on the impact of ESE, especially its impact as the venture continues to grow (McGee & Peterson, 2019).

3.2 Research instrument

The research instrument was a self-administered online questionnaire; this was the most advantageous method as it allowed for extensive geographical reach (Galawe, 2017). The research instrument contained multi-item scales to measure the independent and dependent variables. The questions pertaining to the constructs were based on a seven-point Likert scale: for training, the scale was from 1 = extremely inadequate to 7 = extremely adequate, and for ESE, the scale was from 1 = extremely unconfident to 7 = extremely confident. All questions in the research instrument were forced questions in an effort to avoid receiving incomplete questionnaires.

Various research instruments from previous research were combined and adapted to enable the instrument to collect data on the constructs that were pertinent to this study (Barreira, 2004). The DV was measured using the original scale by Chen et al. (1998). The formulation of the training scale drew inspiration from Brijlal (2008), who advised that BDS training consider the specific needs of entrepreneurs and their businesses and thus provide services that would cater to those unmet needs. Further inspiration was also drawn from McGee et al. (2009), who suggested that training programmes take into consideration the multidimensional nature of entrepreneurial tasks. As a result, the training scale was adopted from the ESE scale and adapted to address training in those specific ESE dimensions. Table 3.1 depicts the structure of the research instrument.

Table 3.1: Research instrument

Section		Authors
Section 1	Consent	n/a
Section 2	Demographics	Barreira (2004)
Section 3	Experience	Baptista and Karaöz (2006)
Section 4	Business Characteristics	Baptista and Karaöz (2006) Urban and Naidoo (2012)
Section 5	Training	Kimando et al. (2012), Chen et al. (1998)
Section 6	ESE	Chen et al. (1998) Venter and Urban (2015) McGee et al. (2009)

3.3 Population and Sample

3.3.1 Population

A population is defined as people or items, otherwise known as a unit of analysis, which possess the characteristics on which the research wishes to focus (Bhattacherjee, 2012). The unit of analysis for this study was entrepreneurs. The population of this study was made up of entrepreneurs that operate their businesses in South Africa, with a particular focus on those that have received BDS training. The study sought to determine the impact of training on the ESE of necessity- and opportunity-driven entrepreneurs; therefore, the population included both groups of entrepreneurs. To measure the effect of BDS training on ESE, the businesses had to have received BDS training. This research was not limited to any industry as that had no bearing on the empirical results that the research sought to obtain.

The sampling frame for this study, which was the section of the population that could be reached (Bhattacherjee, 2012), included entrepreneurs whose BDS providers worked hand in hand with C4G and amounted to approximately 3 400 businesses from 24 BDS providers.

3.3.2 Sampling

Sampling is “the process of selecting a subset that is representative of the population”, which allows for the speedy collection of data, accurate results and cost efficiency (Rahi, 2017, p. 3). Because it is not possible to study the entire population, sampling allows the inferences to be made from the sample to generalise about the population (Bhattacherjee, 2012).

Non-probability sampling was used as this method is advantageous when facing time constraints (Cooper & Schindler, 2008). A convenience sampling method was used to deduce the sample (Etikan, Musa, & Alkassim, 2016), and participants that were readily available were used in this study (Wagner, Kawulich, & Garner, 2012). The contractual agreement with Catalyst for Growth (C4G) provided the advantage of access to entrepreneurs that had received BDS

training, the entrepreneurs whose BDS providers work with C4G were prioritised when the primary data was collected.

3.4 Data collection

Primary data was collected using online questionnaires derived from Qualtrics. The online platform was easy to use and allowed easy transfer of the data collected to SPSS. It was assumed that since the respondents had worked with C4G, they were already exposed to the research processes. Respondents were persuaded to participate in this study through explaining the benefits of the findings for them, which were that this study could increase the effectiveness of BDS programmes that they participate in, which would have a positive effect on their ESE.

An email was distributed which provided the link giving access to 1 500 entrepreneurs whose BDS providers were working with C4G. The respondents were slow to complete the questionnaire. This led to a second collection method of sending the entrepreneurs direct WhatsApp messages, requesting them to complete the questionnaires. This method proved successful and resulted in many of the respondents completing the questionnaire.

Taking the sampling frame into consideration, the convenience method of sampling calculation was expected to yield a sample size of 333 respondents at 95 per cent confidence level (Bartlett, Kotrlik, & Higgins, 2001). The sample size required depends on various factors including the desired power, level of the alpha, the number of predictor variables, and expected effect sizes (Tabachnick & Fidell, 2013),however, the number of questionnaires that were returned were 661, and after cleaning the data and treating it for outliers it was reduced to a sample size of 519 respondents.

3.5 Validity and reliability

The data that was collected for data analysis was exported from Qualtrics onto SPSS. Once the data was in SPSS, it was cleaned. This included removing items

that add no value such as ‘html’ tags and the date that the questionnaire was completed. The advantage of using Qualtrics was having data that was already coded. The validity and reliability test are described in the following sub-sections.

3.5.1 Validity of constructs

Validity answers the question of whether the research instrument will collect the data the research requires (Wagner et al., 2012); it refers to the degree to which a measure sufficiently embodies the construct that it is meant to measure (Bhattacherjee, 2012). Convergent validity refers to how much an item relates to the construct that is being measured, and discriminant validity refers to how much an item measures only the relevant construct and no other construct (Bhattacherjee, 2012). Both were tested using exploratory factor analysis. For convergent validity, items belonging to the same construct had to show high-correlations with each other, and for discriminant validity, items belonging to one construct had to show low-correlation with items belonging to other constructs. Exploratory factor analysis was run on the overall set of items. Factor analysis formulated scales based on the loading of items. Items that load on the same scale and not on other scales form a new scale (Gerbing & Anderson, 1988).

3.5.2 Reliability of measurement scales

Reliability is the degree to which a measuring instrument derives results that are “consistent and dependable” (Bhattacherjee, 2012, p. 56). Testing for reliability means testing for whether the research instrument will yield the same results when the research is conducted at a different time (Wagner et al., 2012); “a measure is reliable to the degree that it supplies consistent results” (Schindler, 2019, p. 239). This means that a scale that is used to measure a specific construct several times, should be able to get the same results every time. It is important to note is that reliability implies that the instrument is consistent but not necessarily accurate (Bhattacherjee, 2012).

There were many different ways in which reliability could be measured, in this study; due to the use of the Likert scale, the type of reliability that was applicable to this study was internal consistency reliability. The decision to make use of the

seven-point Likert scale was due to the suggestion by Thomas and Lewis (1993) that seven-point scales portray better results when measuring correlations with t-tests results; this was relevant to this study as independent sample T-tests were used to compare the ESE of necessity- and opportunity-driven entrepreneurs. Finstad (2010) advocated that these scales are better suited when using electronic surveys, and are ideal when the research is directed at individuals (Hair, Anderson, Babin, & Black, 2010). The seven-point Likert scale was ideal for this research as the unit of analysis was entrepreneurs and the primary way in which data was collected was through self-administered online surveys.

Internal consistency reliability measures the level of consistency of the different items that belong to a construct (Bhattacherjee, 2012). If a construct has multiple items, the degree to which the respondents perceive those items as similar reflects on the internal consistency of a construct. For the purpose of this research Cronbach's alpha was used to measure reliability because it was designed to measure the internal consistency of scales.

3.6 Data Analysis

The statistical analyses conducted are discussed in the following sub-sections.

3.6.1 Descriptive statistics

Descriptive statistics are the "numerical and graphical techniques used to organise, present and analyse data" (Fisher & Marshall, 2009, p. 93). Descriptive tests analyse the distribution of the data values, and reveal the shape of the data (Walliman, 2011). The data was analysed using frequency distributions and the central tendency of the data was analysed using the mean, median, and mode (Walliman, 2011). These tests were conducted on the demographics of the respondents as well as on their experience and business characteristics to determine if they were necessity- or opportunity-driven entrepreneurs. From there the bias in the data was reduced by identifying and dealing with outliers, and thereafter the data was tested for regression assumptions.

3.6.2 Correlation analysis

Once the normality of the data was tested, correlations between the variables were measured. Using bivariate analysis, the relationship between two variables, in relation to each other can be determined (Walliman, 2011). The objective of this study was to determine the impact of BDS training on the ESE of necessity- and opportunity-driven entrepreneurs. Correlation analysis was used to ascertain if there was a linear relationship between the dependent variable (DV) and the two independent variables (IV), as well as determine if the relationship was positive or negative. Correlation coefficients helped to measure the relationship in terms of the direction, negative or positive, as well as the degree of association, and significance of the relationship (Walliman, 2011).

3.6.3 Regression analysis

Inferential statistics are designed to test hypotheses. Multiple linear regression analysis was used to determine the strength of the variables once their correlation had been determined (Bhattacherjee, 2012); it was used to test the first hypothesis of this study:

- H1: Training has a more positive impact on the ESE of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.

Independent sample T-tests were used to determine the second hypothesis:

- H2: The ESE of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.

3.7 Ethical considerations

In order for research to be ethically sound, the following ethical considerations by Wagner et al. (2012) were considered:

- *Gatekeepers:* The necessary permissions were received from C4G who assisted in making contact with the relevant entrepreneurs when administering the research instrument.

- *No harm to participants:* This included physical, emotional, psychological and even reputational damage.

- *Reciprocity:* In exchange for the information given by the respondents, the results would be made available to them. No paying or giving of gifts was considered. The cover letter of the research instrument addressed this issue by thanking the respondents for their participation and also by explicitly stating that the results of the research would be made available to them should they wish to receive them.

- *Consent:* Informed consent of the respondents was requested as a qualifying criteria to use the respondent's data.

- *Anonymity:* Confidentiality of the respondents was guaranteed.

3.8 Conclusion

This chapter focused on the research methodology that was used to conduct this study, in particular the data collection and sampling methods, description of the research instrument, the validity of the constructs and the reliability of the measurement scales as well as the data analysis techniques. Lastly the ethical considerations that governed the research methodology were outlined.

CHAPTER 4: RESULTS PRESENTATION

In this chapter, the results obtained using the methodology that was detailed in the previous chapter are presented. First, the demographic profile of the respondents, business characteristics, and previous experience are outlined. Second, the descriptive statistics are analysed to assess for missing data and the overall distribution of the data. Next, the validity and reliability results outlining the factor analysis are presented. Fourth, the correlation of the independent variables with the dependent variables is examined. Lastly, the statistical assumptions are tested and regression analysis expounded for testing the hypotheses.

4.1 Data screening

The number of responses to the survey was 661. During data cleaning, unnecessary columns with irrelevant data such as IP addresses, and duration of time the respondents took to complete the questionnaire were deleted, respondents who did not give their consent and those that did not complete the questionnaire in full were also deleted leaving 620 fully completed questionnaires. All the questions in the questionnaire were forced response to eliminate issues with missing data. There were 52 respondents that did not participate in any BDS training and were consequently removed. During the testing of statistical assumptions, outliers were identified and in dealing with the outliers an additional 49 respondents were deleted leaving a final sample size of 519 respondents.

4.2 Demographic profile of respondents

4.2.1 Entrepreneur profile

The demographic split between male and female was fairly even with 45.5 per cent male, 44.5 per cent female, and 10 per cent other. Figure 4.1 illustrates the distribution of the sample according to gender.

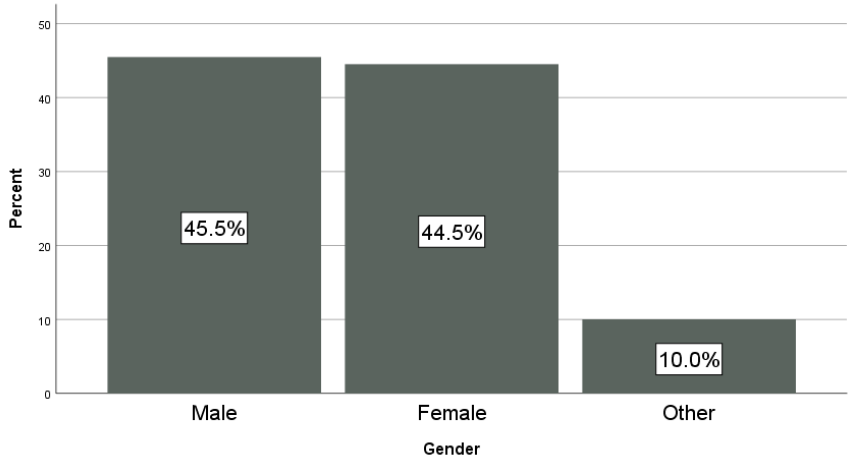


Figure 4.1: Gender

With regard to age, the range with the most respondents was the 26 to 35 year age group with 63 per cent of the respondents, followed by 34 per cent in the 18 to 25 year age group, two per cent in the 36 to 45 year age group, 0.6 per cent respondents in the 46 to 55 year age group and 0.2 per cent belonging to the older than 55 years age group. Figure 4.2 illustrates the distribution of the sample according to age.

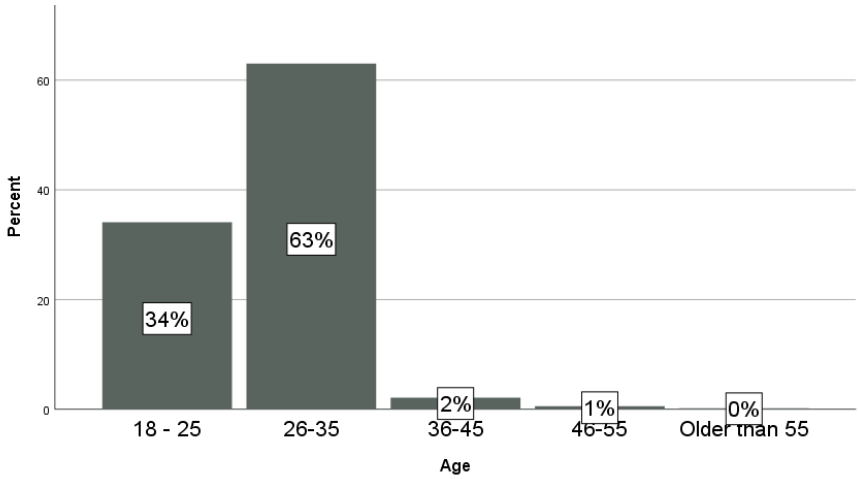


Figure 4.2: Age

The majority of the respondents had a qualification after matric, 30 per cent had a degree, 27 per cent had an honours degree or equivalent, 12 per cent had a diploma, 10 per cent had a Master's degree and two per cent had a PhD. Only four per cent of the respondents did not matriculate and seven per cent had only

a matric certificate. Figure 4.3 illustrates the distribution of the sample according to education level.

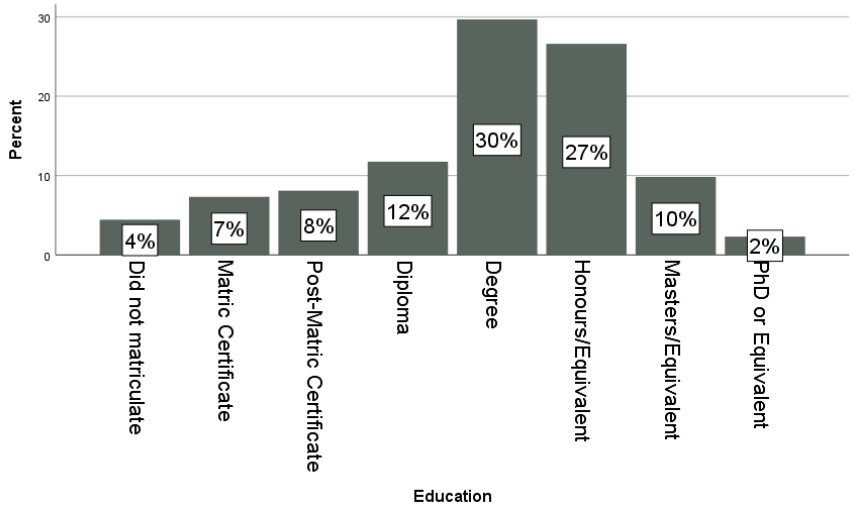


Figure 4.3: Education

In terms of race the sample was largely skewed with 75 per cent of the respondents being African. Other race groups that are represented are coloured people, 8.3 per cent, Indian people and white people, each with 6.4 per cent, Asian people, 2.9 per cent, and other, one per cent. Figure 4.4 illustrates the distribution of the sample according to race.

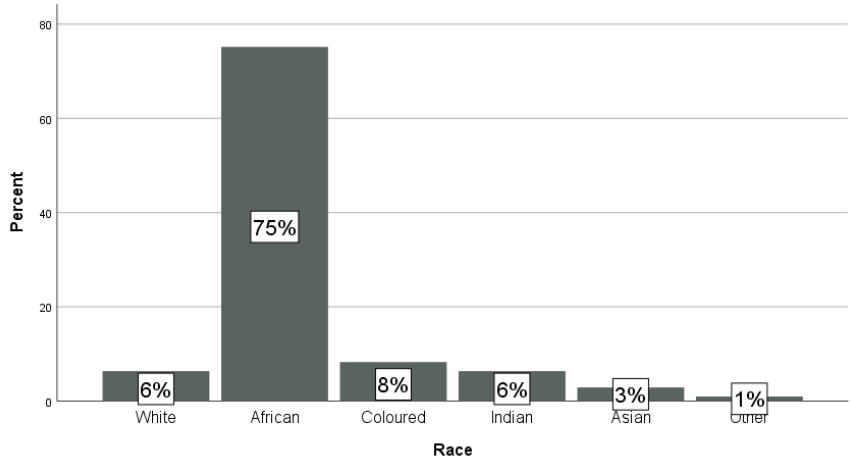


Figure 4.4: Race

4.2.2 Business characteristics

The majority of the respondents, 96 per cent, operated their businesses in the Gauteng province, the rest of the provinces from which the remainder of the respondents operated, were KwaZulu-Natal 1.7 per cent, Western Cape 0.8 per cent, Eastern Cape 0.6 per cent, Mpumalanga 0.4 per cent, Limpopo and the Free State each with 0.2 per cent. The bias towards the Gauteng province can be attributed to the fact that C4G operates in the Gauteng province and has a working relationship with BDS providers that are based mainly in that particular province. Figure 4.5 illustrates the business location distribution according to province.

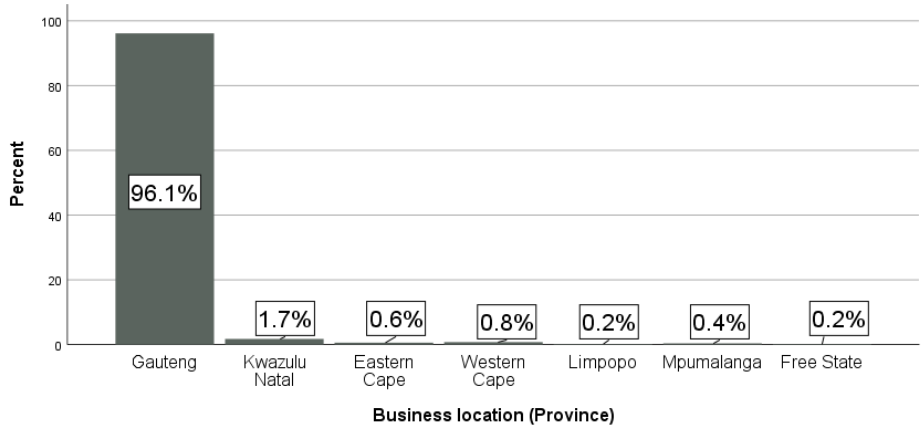


Figure 4.5: Business location

The statistics in terms of the age of the business, Figure 4.6 reveals that the majority of the businesses, 69 per cent, belonged to the established business phase (Singer et al,, 2018), more than 3.5 years in existence, 26 per cent were between four and 42 months old, and five per cent were three months old or less.

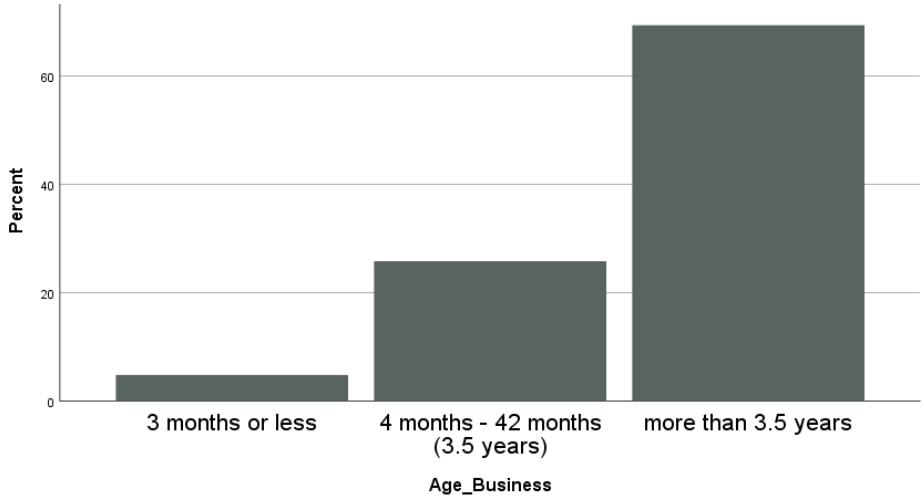


Figure 4.6: Business age

In terms of the total number of employees, classifying whether the business was a small, medium, or micro enterprise, 37 per cent of the businesses had between 2- and 10 employees, 36 per cent of the businesses had between 11 and 50 employees, 15 per cent of the businesses operated with the owner as the only employee, 13 per cent had 51 to 250 employees and 0.2 per cent respondents, had 251 employees or more. Figure 4.7 illustrates the distribution of the sample according to number of employees.

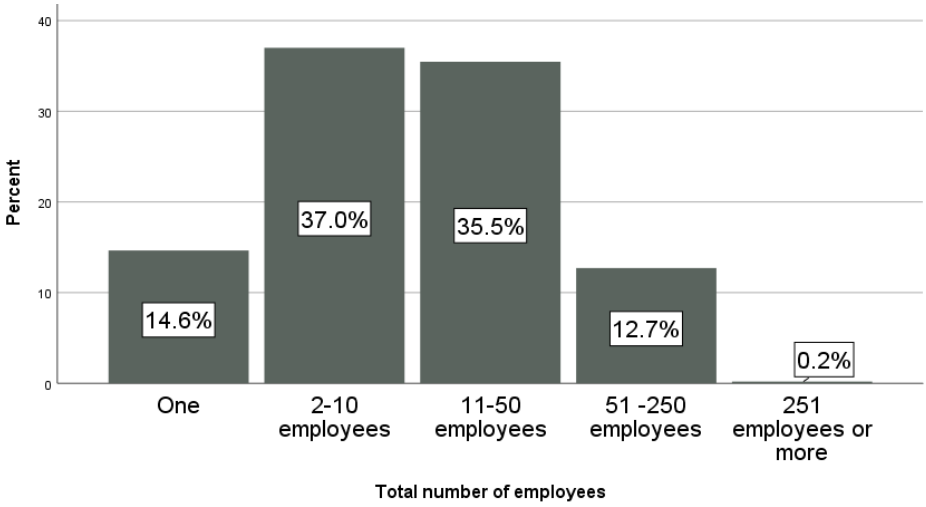


Figure 4.7: Number of employees

One of the ways in which necessity- and opportunity-driven entrepreneurs can be classified is by identifying whether or not the entrepreneur went into business as the sole owner of the business or with other partners (Baptista & Karaöz,

2006). Two thirds of the respondents (66 per cent) went into business as sole owners and 34 per cent of the respondents were co-co-owners of their businesses. Figure 4.8 illustrates the distribution of the sample according to number of owners at inception of business.

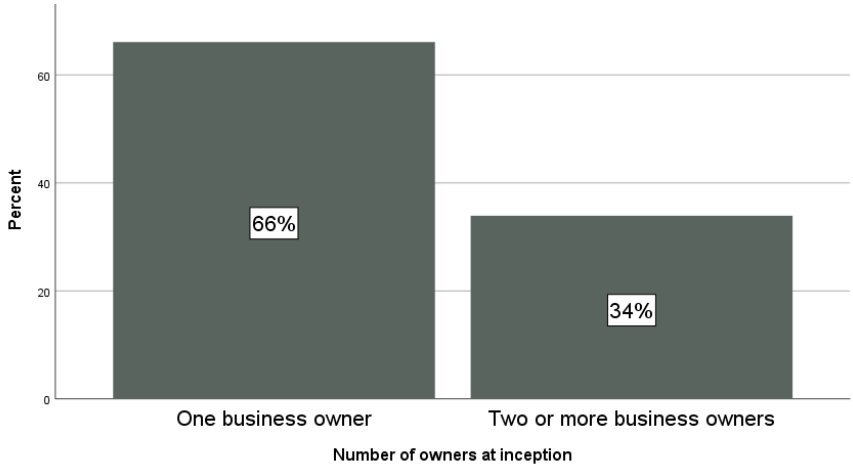


Figure 4.8: Number of owners at inception of business

4.2.3 Previous work experience

With regard to employee experience, the majority of the respondents had previous work experience, with 54 per cent having one to three years' work experience, followed by 15 per cent that had seven to nine years' experience, 13.1 per cent with four to six years' experience, and 12.7 per cent have ten or more years' experience. Only 4.7 per cent respondents had no previous work experience. Table 4.1 illustrates the distribution of the sample according to employee experience.

Table 4.1: Employee experience

Variable		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	I have no previous work experience	25	4.8	4.8	4.8
	1 - 3 years	282	54.3	54.3	59.2
	4 - 6 years	68	13.1	13.1	72.3
	7 - 9 years	78	15.0	15.0	87.3
	10 years and more	66	12.7	12.7	100.0
	Total	519	100.0	100.0	

In terms of previous management experience, the majority of the respondents, 71 per cent, had no previous management experience, this was followed by 26 per cent who had one to three years' experience. Two per cent had four to six years' experience, one per cent, seven to nine years' experience, and only 0.2 per cent respondents had 10 or more years' management experience. Table 4.2 illustrates the distribution of the sample according to management experience.

Table 4.2: Management experience

Variable		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	I have no previous managerial experience	366	70.5	70.5	70.5
	1 - 3 years	137	26.4	26.4	96.9
	4 - 6 years	10	1.9	1.9	98.8
	7 - 9 years	5	1.0	1.0	99.8
	10 years and more	1	.2	.2	100.0
	Total	519	100.0	100.0	

Two thirds of the respondents (66 per cent) did not have any previous business ownership experience, 32 per cent had one to three years' business ownership experience, four per cent had four to six years' business ownership experience, 0.2 per cent had seven to nine years' business ownership experience, and 10 or

more years of business ownership experience each. Table 4.3 illustrates the distribution of the sample according to business ownership experience.

Table 4.3: Business ownership experience

Variable		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	I have no previous business ownership experience	329	63.4	63.4	63.4
	1 - 3 years	167	32.2	32.2	95.6
	4 - 6 years	21	4.0	4.0	99.6
	7 - 9 years	1	.2	.2	99.8
	10 years and more	1	.2	.2	100.0
	Total	519	100.0	100.0	

For industry experience, the biggest group was 48 per cent respondents who had one to three years' industry experience, 14.3 per cent had seven to nine years' experience, 14.1 per cent had 10 years and more industry experience, 11.9 per cent had four to six years' industry experience, and only 11.4 per cent had no previous industry experience. Table 4.4 illustrates the distribution of the sample according to industry experience.

Table 4.4: Industry experience

Variable		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	I have no previous industry experience	59	11.4	11.4	11.4
	1 - 3 years	251	48.4	48.4	59.7
	4 - 6 years	62	11.9	11.9	71.7
	7 - 9 years	74	14.3	14.3	85.9
	10 years and more	73	14.1	14.1	100.0
	Total	519	100.0	100.0	

With regard to whether the respondents owned any other business prior to starting their current business, the majority of the respondents, 72 per cent, did

not own any businesses and 28 per cent owned other businesses prior to their current business. Table 4.5 illustrates the distribution of the sample according to ownership of business before current business.

Table 4.5: Prior business ownership

Variable		Frequency	Per cent	Valid Per cent	Cumulative Per cent
Valid	Yes	143	27.6	27.6	27.6
	No	376	72.4	72.4	100.0
	Total	519	100.0	100.0	

4.2.4 Necessity- and opportunity-driven entrepreneurs

There are many ways in which necessity- and opportunity-driven entrepreneurs can be classified, for the purpose of this study, the respondents' state of unemployment or employment in the year that they started their business was used to determine whether the respondents were necessity- or opportunity-driven entrepreneurs (Baptista & Karaöz, 2006). Most of the respondents, 81 per cent, were employed in the year that they started operating their business, the assumption being that they were opportunity-driven entrepreneurs, and 19 per cent were necessity-driven entrepreneurs. The distribution of necessity- and opportunity-driven entrepreneurs is illustrated in Figure 4.9.

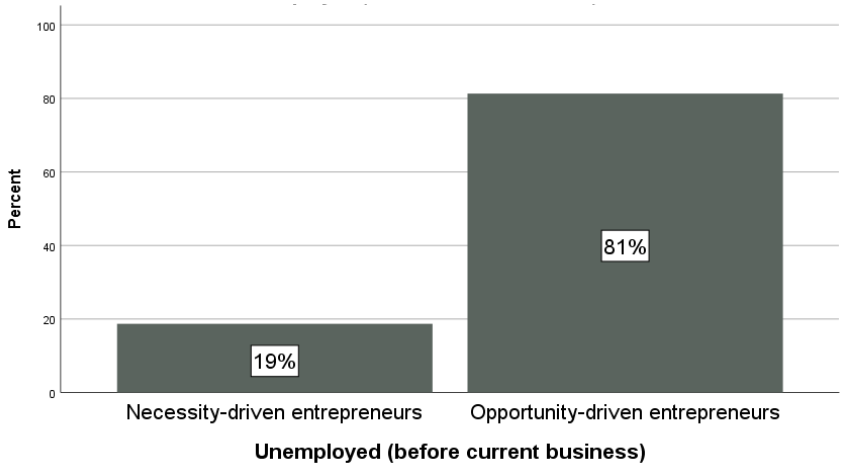


Figure 4.9: Necessity- and opportunity-driven entrepreneurs

4.3 Descriptive statistics

The distribution of the data, central tendency, and dispersion were determined using descriptive statistics. Descriptive statistics tables in Appendix B show that the mean scores of the items lean mostly towards the high end of the seven-point Likert scale; all the mean scores were above six. The high average scores indicated that the training received by the respondents was between ‘adequate’ and ‘more than adequate’, and that they rated their level of confidence in their ability to complete entrepreneurial tasks as ‘confident’ to ‘extremely confident’. The standard deviation values for the variables were small, thereby indicating that there was no major dispersion of the data from the mean (Pituch & Stevens, 2016).

4.4 Validity of constructs

In order to determine the underlying dimensions of training and ESE, to test their validity and the number of items that converge per factor, an exploratory factor analysis was run using SPSS. The questionnaire was designed using the ESE scales formulated by Chen et al. (1998), which were adapted into a task-specific scale to measure training on the five ESE dimensions. The extraction method used was principal axis factoring, as this is the best method to use when attempting to identify latent constructs. Promax, which is an oblique rotation

method, was selected and a cut-off value of one was used to determine the factors based on eigenvalues, and small factor loadings were supressed at a cut-off of 0.4.

The first attempt of the factor analysis was run on the IV and the DV together. All the items under training converged into one factor with 27 items. The ESE scale converged into three factors measuring innovation, financial control and marketing. Several efforts were made to extract the most factors including running the test on the IVs and the DVs separately with the option to extract five factors. The result was that four factors converged per scale; however, two items per factor converged with eigenvalues below one.

The final effort of the factor analysis was run on the IV and DV separately. The initial factors that were separated into scales as per the questionnaire were: independent variables (marketing training, innovation training, management training, risk-taking training and financial control training) and dependent variables (ESE marketing, ESE innovation, ESE management, ESE risk-taking and ESE financial control. Table 4.6 illustrates the final factors converged into two independent variables and three dependent variables.

Table 4.6: Independent and dependent variables.

Independent Variables	Dependent Variables
Entrepreneurial training Financial control training	ESE marketing ESE innovation ESE financial control

The results of the EFA are expounded in the sub-sections that follow.

4.4.1 EFA – Training

An exploratory factor analysis was conducted on the 27 items intended to measure training. The measuring instrument for training consisted of five multi-item scales: marketing training, innovation training, and training financial-control were measured using a scale consisting of six items each, management training was measured using a five-item scale, and risk-taking training was measured

using a four-item scale. As previously stated, the measurement scale for training was adopted from the ESE scale by Chen et al. (1998) and adapted as a task-specific scale to measure training based on the constructs measured for ESE.

Table 4.7 shows the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of Sphericity. The minimum criterion for KMO is 0.5; a value that is close to one indicates "patterns of correlations [which] are relatively compact and therefore factor analysis should yield distinct and valid factors" (Field, 2018, p. 250). The KMO value of .973 indicated that the sample size of n = 519 is more than adequate. The Bartlett's test of Sphericity should be significant at $p < 0.05$ indicating that there is at least one significant correlation in the sample. The approximate chi-square of 16065.236, df = 351, and $p < 0.05$ indicated that the correlation between the items was large enough and significant for factor analysis. There were also no issues with multicollinearity as none of the variables had very high correlations where $r > 0.8$.

Table 4.7: KMO and Bartlett's test – Training

Test		Result
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.973
Bartlett's Test of Sphericity	Approx. Chi-Square	16065.263
	df	351
	Sig.	.000

Initially, training had five multi-item scales. Table 4.8 indicates that the EFA resulted in the items converging into two factors. All of the items made the 0.4 cut off score. marketing training, innovation training, management training and risk-taking training all converged into one factor which was renamed entrepreneurial training, thus converting it into a general training factor and all the items for financial control training converged into the second factor which retained its name. This meant that the hypothesis was tested with one general and one task-specific training factor.

Table 4.8: Pattern matrix – Training

Variable	Factor	
	1	2
Training_Marketing (3)	.852	
Training_Innovation (1)	.839	
Training_Innovation (5)	.776	
Training_Marketing (2)	.772	
Training_Marketing (4)	.768	
Training_Marketing (1)	.764	
Training_Innovation (2)	.757	
Training_Marketing (6)	.720	
Training_Innovation (3)	.706	
Training_Innovation (6)	.705	
Training_Marketing (5)	.704	
Training_Risk-taking (1)	.690	
Training_Risk-taking (3)	.673	
Training_Risk-taking (2)	.659	
Training_Risk-taking (4)	.650	
Training_Management (1)	.596	
Training_Innovation (4)	.588	
Training_Management (5)	.580	
Training_Management (2)	.568	
Training_Management (3)	.546	
Training_Management (4)	.526	
Training_Financial control (4)		.945
Training_Financial control (5)		.831
Training_Financial control (3)		.753
Training_Financial control (6)		.717

Variable	Factor	
	1	2
Training_Financial control (1)		.672
Training_Financial control (2)		.654

Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization.[a]
a. Rotation converged in 3 iterations.

Table 4.9 illustrates the two factors that converged at eigenvalues greater than one. The first factor explains 65.97 per cent of the total variance, and the cumulative percentage of the first and second factor explains 69.07 per cent of the total variance at an eigenvalue of 1.006 after extraction.

Table 4.9: Total variance explained – Training

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	17.813	65.973	65.973	17.489	64.773	64.773	16.804
2	1.006	3.724	69.697	.714	2.645	67.419	14.811
3	.837	3.101	72.798				
4	.762	2.821	75.620				
5	.591	2.190	77.810				

Extraction Method: Principal Axis Factoring.
a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

The scree plot, Figure 4.10, also confirms that two factors can be extracted at an eigenvalue above one.

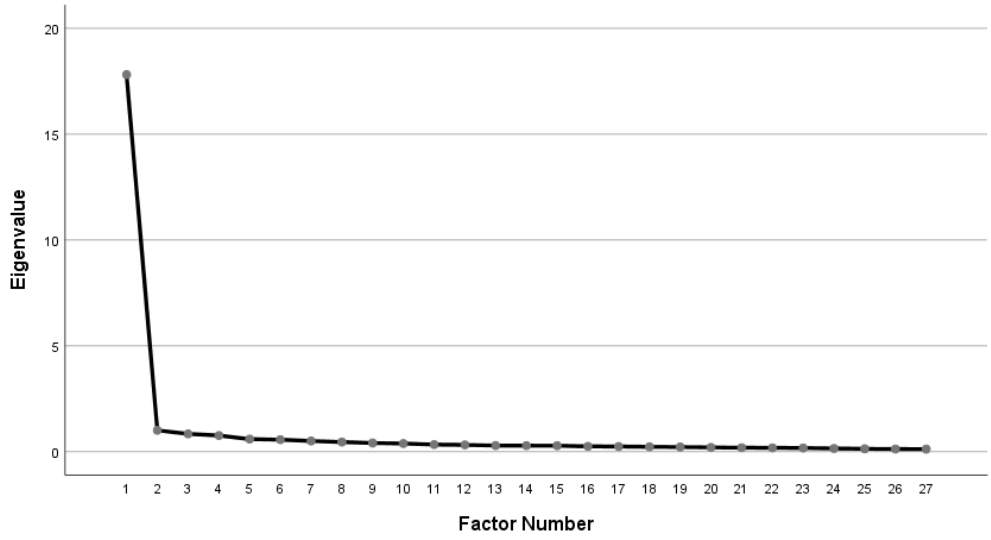


Figure 4.10: Scree plot – Training

4.4.2 EFA – ESE

An exploratory factor analysis was conducted on the 27 items intended to measure ESE. The measuring instrument for ESE consisted of five multi-item scales adopted from Chen et al. (1998). ESE marketing, ESE innovation, and ESE financial-control were measured using a scale consisting of six items each, ESE management was measured using a five-item scale, and ESE risk-taking was measured using a four-item scale.

Table 4.10 indicates that the KMO value was greater than .5 and a value of .960 indicated that the sample size of n = 519 was more than adequate. The Bartlett's test showed an approximate chi-square = 11144.551, df = 235, and $p < 0.05$ indicating that the correlation between the items was large enough and significant for factor analysis and there were no issues with multicollinearity as none of the variables had very high correlations where $r > 0.8$.

Table 4.10: KMO and Bartlett's Test – ESE

Test		Result
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.960
Bartlett's Test of Sphericity	Approx. Chi-Square	11144.551
	df	253
	Sig.	.000

Similar to the training construct, ESE had five multi-item scales consisting of 27 items. The initial EFA resulted in the items converging into three factors. The items ESE management (3), ESE management (1) and ESE management (4) refused to load; ESE marketing (6) cross-loaded on Factor 1 and Factor 3. The four items stated above were then removed for the second EFA run and the result was a perfect three factor loading with all the items making the cut-off score of 0.4. The six items that were intended to measure ESE innovation, the four items that were intended to measure ESE risk-taking, together with ESE management (2) converged into one item. After examining the questions that were associated with those items, the first factor was named ESE innovation. The second factor consisted of the ESE financial control items (1-6) as well as ESE management (1), that factor remained as ESE-financial control. The third factor was made up of the ESE marketing items one to five. The factor loadings are seen in Table 4.11

Table 4.11: Pattern matrix – ESE

Variable	Factor		
	1	2	3
ESE_Innovation (2)	.870		
ESE_Innovation (3)	.753		
ESE_Innovation (1)	.720		
ESE_Risk-taking (4)	.716		
ESE_Innovation (4)	.711		

Variable	Factor		
	1	2	3
ESE_Risk-taking (1)	.701		
ESE_Risk-taking (2)	.652		
ESE_Risk-taking (3)	.645		
ESE_Innovation (5)	.614		
ESE_Innovation (6)	.608		
ESE_Management (2)	.406		
ESE_Financial control (5)		.827	
ESE_Financial control (4)		.818	
ESE_Financial control (1)		.762	
ESE_Financial control (3)		.745	
ESE_Financial control (2)		.720	
ESE_Financial control (6)		.707	
ESE_Management (5)		.411	
ESE_Marketing (2)			.750
ESE_Marketing (3)			.666
ESE_Marketing (1)			.657
ESE_Marketing (4)			.656
ESE_Marketing (5)			.604

Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization.[a]
a. Rotation converged in 6 iterations.

Table 4.12 illustrates the three factors that converged at eigenvalues greater than one. The first factor explains 57.90 per cent of the total variance, the cumulative percentage of the first and second factor explains 65.09 per cent of the total variance, and the three factors explain 69.55 per cent of the total variance at an eigenvalue of 1.025 after extraction.

Table 4.12: Total variance explained – ESE

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	13.317	57.899	57.899	12.973	56.406	56.406	10.981
2	1.654	7.191	65.090	1.307	5.681	62.087	10.948
3	1.025	4.458	69.549	.703	3.054	65.141	9.619
4	.651	2.832	72.381				
5	.620	2.694	75.074				

Extraction Method: Principal Axis Factoring.
a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

The scree plot, Figure 4.11, also confirms that three factors can be extracted at an eigenvalue above one.

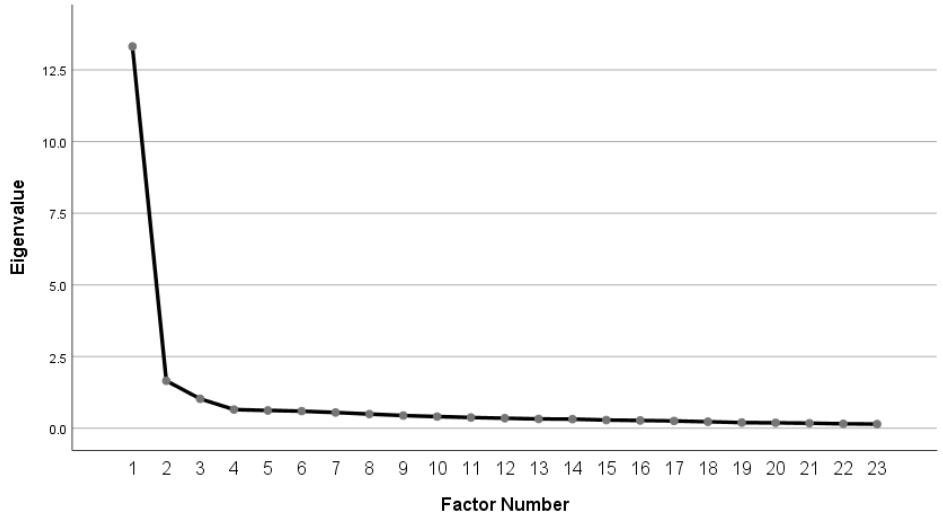


Figure 4.11: Scree plot – ESE

4.5 Reliability of measurement scale results

The reliability of the scale was tested using Cronbach's alpha. Cronbach's alpha reliability coefficient ranges between zero and one, where the closer the coefficient is to one, the greater the internal consistency of the items in a scale

(Gliem & Gliem, 2003). George and Mallery (2003) offered the following rules of thumb for the coefficients: >.9 = excellent, >.8 = good, >.7 = acceptable, >.6 = questionable, >.5 = poor, and <.5 = unacceptable. The five factors that converged in the EFA were tested for reliability using Cronbach's alpha. Table 4.13 provides the summary of the five scales that were measured for reliability.

Table 4.13: Summary of construct reliability results

High level factors	Constructs	Latent factors	No. of items	α before adjustment	Items deleted	α after adjustment
Independent variables	Training	Entrepreneurial training	21	.976	None	.976
		Financial control training	6	.936	None	.936
Dependent variables	ESE	ESE marketing	5	.921	None	.921
		ESE innovation	11	.939	None	.939
		ESE financial control	7	.933	1	.934

4.5.1 Entrepreneurial training

As seen in Table 4.13 the overall reliability of the entrepreneurial training scale indicated excellent reliability with α = .976. The corrected item-total correlation table for entrepreneurial training in Appendix B shows the correlations of items with each other and with the total score from the questionnaire, the items should correlate with each other (Field, 2018). Items with a correlation of less than .3 meant that that item did not correlate well with the other and was therefore dropped to improve reliability (Galawe, 2017). For the scale entrepreneurial training, the alphas were all above .7 indicating all the items were well correlated. The 'Cronbach's alpha if item deleted' column represents the value that the alpha would be if the item were to be deleted. Deleting that item would improve reliability, in this scale there were no items that could be deleted to improve reliability.

4.5.2 Financial control training

As seen in Table 4.13 financial control training has an overall reliability with a reliability score of .936 indicating excellent reliability. The correlation table for financial control training in Appendix B indicates that the items were well correlated and that no item could be deleted to improve reliability.

4.5.3 ESE marketing

Table 4.13 indicates an excellent reliability score of .921 for ESE marketing. The correlation table for ESE marketing in Appendix B indicates that the items were well correlated with all the alphas above .7; no item could be deleted to improve reliability.

4.5.4 ESE innovation

Table 4.13 indicates an excellent reliability score of .939 for ESE Innovation. The correlation table for ESE innovation in Appendix B indicates that the items were well correlated with the lowest alpha being .646 for ESE innovation (1) and that no item could be deleted to improve reliability.

4.5.5 ESE financial control

Table 4.13 indicates an excellent reliability score of .933 for ESE innovation. The correlation table for ESE financial control in Appendix B indicates that the items were well correlated with the lowest alpha being .660 for ESE management (5), the Cronbach's alpha if item deleted for that same item also indicates that should the item be deleted, Cronbach's alpha would increase to .934. ESE management (5) was therefore deleted to improve the reliability of the scale. The correlation table for ESE financial control, after deletion in Appendix B represents the new reliability results after the ESE management (5) scale was deleted. Cronbach's alpha increased to .934 and the items were still well correlated with Cronbach's alpha above 0.7.

The mean scores of all the items that converged into specific factors were used to compute the composite score of each construct. Entrepreneurial training and

financial control training became the IVs and ESE marketing, ESE innovation and ESE financial control became the DVs moving forward.

4.6 Correlation analysis

The correlation matrix assesses the degree to which two variables are related (Tabachnick & Fidell, 2013). Table 4.14 reports the Pearson correlation coefficients with levels of significance denoted. The correlation between entrepreneurial training and all the three ESE dimensions, ESE innovation, ESE financial control, and ESE marketing was strong, positive and significant at a 99 per cent confidence level. The strongest correlation being between entrepreneurial training and ESE marketing were $r = .636$ and $p < 0.01$. The correlation between financial control training and all the three ESE dimensions, ESE innovation, ESE financial control, and ESE marketing was strong, positive and significant at a 99 per cent confidence level. The strongest was between financial control training, and ESE innovation and ESE financial control where the correlation coefficients were $r = .579$ for both correlations respectively and $p < 0.01$.

Table 4.14: Pearson correlations

Variable	Entrepreneurial Training	Financial Control Training	ESE Innovation	ESE Financial Control	ESE Marketing
Entrepreneurial Training	1				
Financial Control Training	.749**	1			
ESE Innovation	.608**	.579**	1		
ESE Financial Control	.588**	.579**	.775**	1	
ESE Marketing	.636**	.555**	.773**	.701**	1

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

4.7 Statistical assumptions testing

This section is a discussion of the assumptions that needed to be met to run the regression analysis.

4.7.1 Outliers

An outlier is a score that is very different from the rest of the data and can bias estimates of parameters (Field, 2013). Figure 4.12 and Figure 4.13 display the boxplots that were derived to identify outliers for the independent variables and the dependent variables.

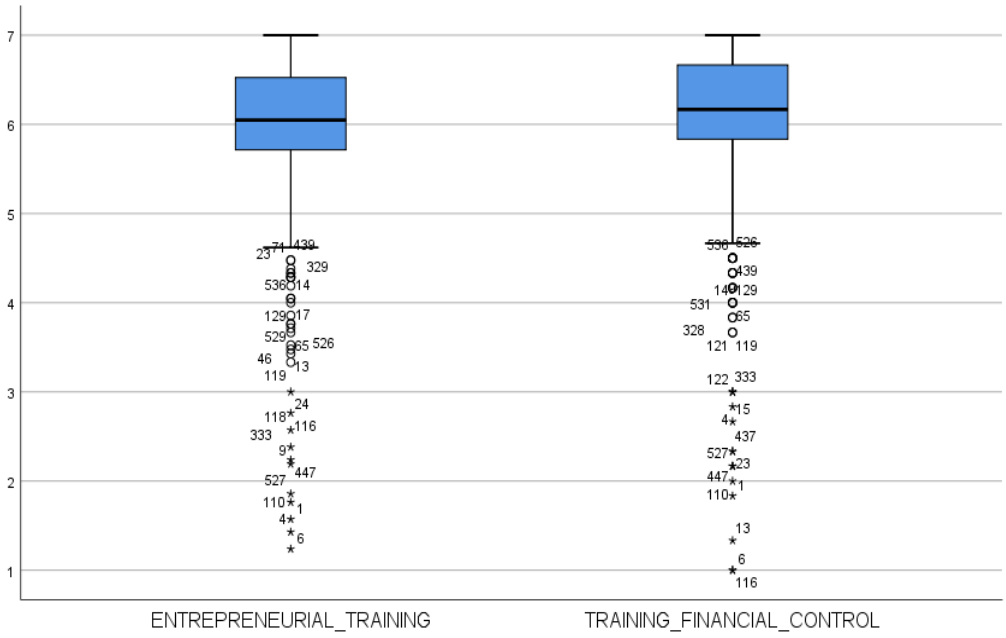


Figure 4.12: Boxplots – Independent variables

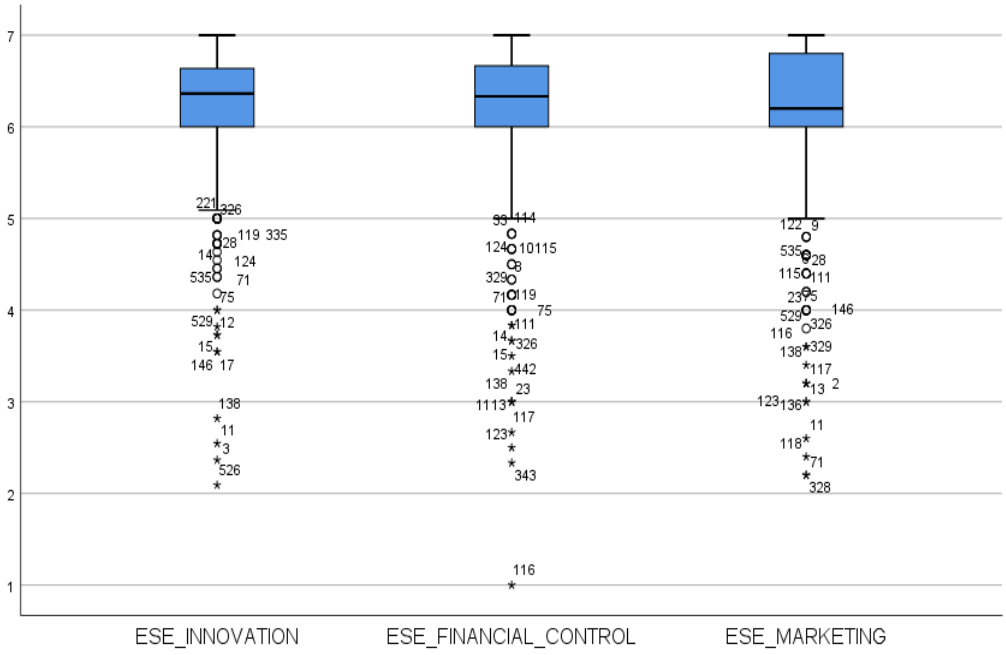


Figure 4.13: Boxplots – Dependent variables

There are various ways in which bias can be reduced. First, a process called winsorising, where the outliers are replaced with the highest value that is not an outlier, is used; these would be extreme scores that have a Z-value above 3.29 (Field, 2018). Running the boxplots again revealed that there were still outliers. The second round of dealing with outliers was trimming the data (Field, 2018), where a total of 49 respondents from the sample were deleted. Skewness and Kurtosis issues were still evident requiring further winsorizing. The process of dealing with outliers reduced the sample size to n=519. Figure 4.14 illustrates the boxplots after outliers had been dealt with.

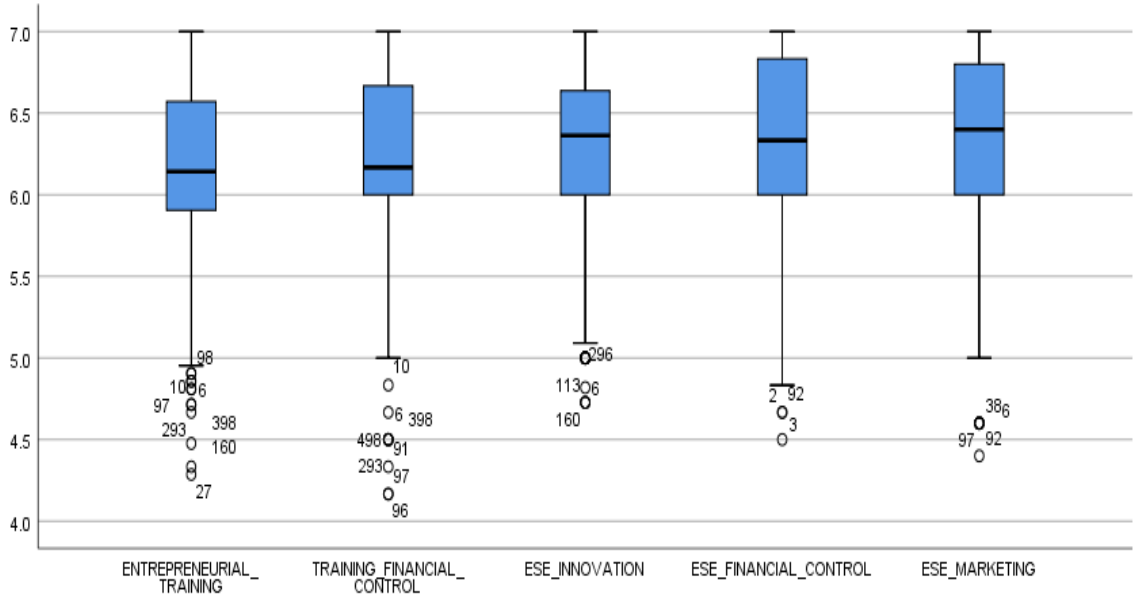


Figure 4.14: Boxplots – Independent and dependent variables.

4.7.2 Linearity

The assumption of linearity suggests that there is a straight-line relationship between the variables. Field (2018) regarded this assumption as the most important because if the assumption of linearity is disproved then the entire model is invalid as it has been described incorrectly. The Pearson moment of correlation was used to test the variables for linearity (Galawe, 2017). Table 4.14 in section 4.6 indicates that all of the variables have a significant linear relationship with each other.

Linearity can also be assessed using bivariate scatterplots, where if the variables are normally distributed and linearly related then the scatter plot should be oval-shaped (Tabachnick & Fidell, 2013). Figures 4.15, 4.16, and 4.17 depict the scatterplots produced for the three dependent variables in relation to the standardised errors. According to Field (2018), if there is any sort of curve in the scatterplot then the assumption of linearity might be violated. Visual inspection of the three scatterplots suggests that the scatterplots do not have a curved shape, they appear to have a somewhat oval shape, and therefore linearity was confirmed.

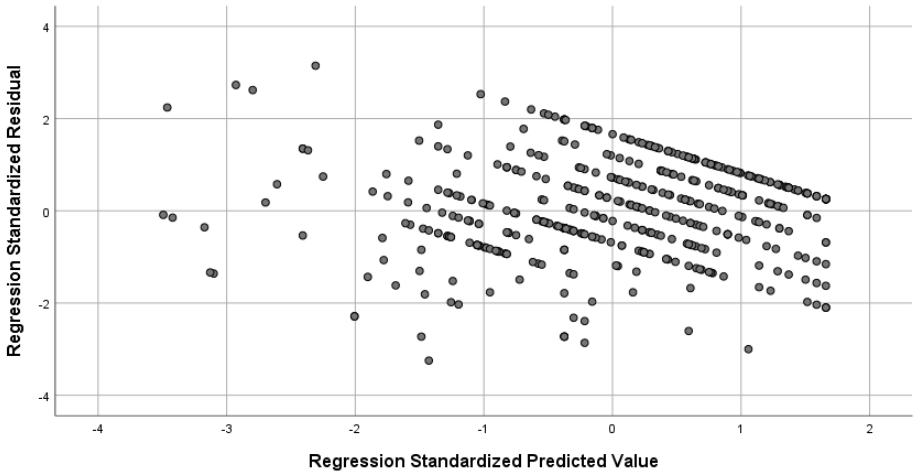


Figure 4.15: Scatterplot – ESE marketing

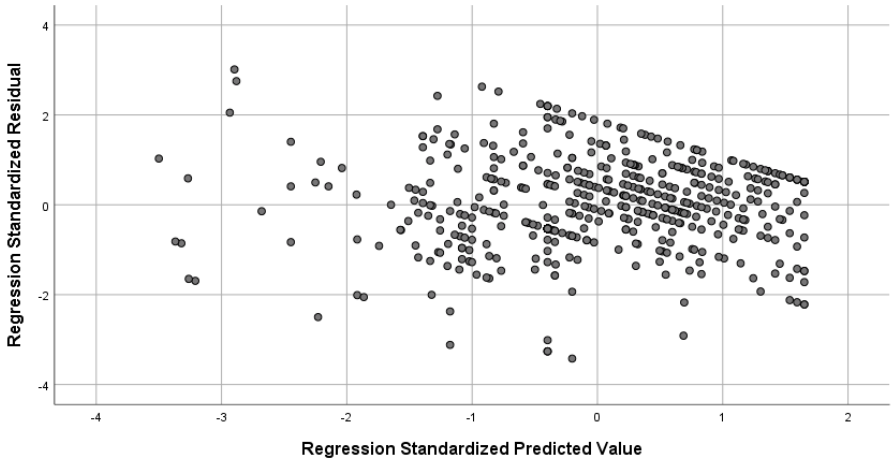


Figure 4.16: Scatterplot – ESE innovation

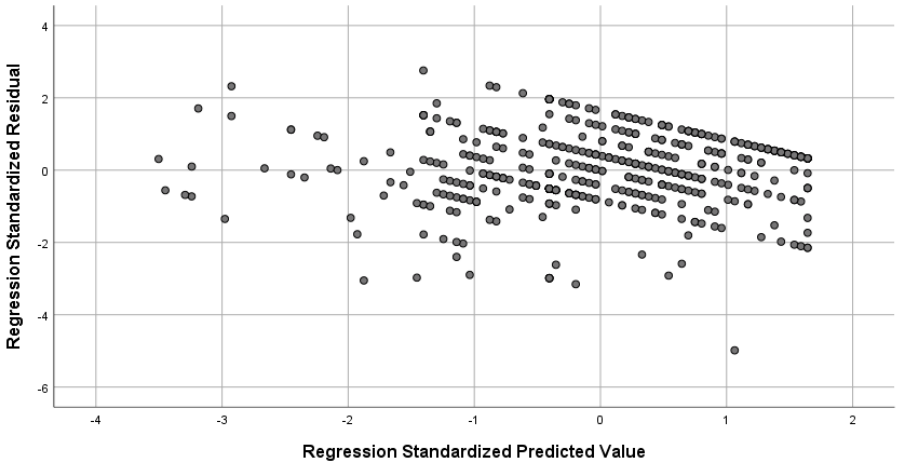


Figure 4.17: Scatterplot – ESE financial control

4.7.3 Homoscedasticity

Homoscedasticity, also known as homogeneity of variance implies that errors have a common variance (Heumann & Schomaker, 2016); this means that the variance of the outcome variable should be stable at all the levels of the predictor variable (Field, 2018). Such as with linearity, homoscedasticity can be identified using scatterplots. Field (2013) states that if the shape of the residuals in the scatterplot funnels out then the data is likely heteroscedastic (not homoscedastic). Figures 4.14, 4.15 and 4.16 in Section 4.7.2 indicate that there was no funnelling in the shapes made in all three of the scatterplots, thereby implying homoscedastic data.

4.7.4 Normality

Screening data for normality is a very important step when conducting multivariate analysis, especially when inference is a goal (Tabachnick & Fidell, 2007). Skewness and kurtosis, Kolmogorov-Smirnov, and Shapiro-Wilk were run to test the data for normality. These are discussed below.

Skewness and kurtosis:

There are two ways in which a distribution can deviate from normal, this can be through lack of symmetry, where the data is said to be skew and pointiness, also called kurtosis (Field, 2018; Pituch & Stevens, 2016). Table 4.15 is a presentation of the skewness and kurtosis results.

The skewness statistics indicated that the data was negatively skewed. Pituch and Stevens (2016) stated that to determine the skewness and kurtosis of the data, each variable's skewness and kurtosis values should be comparable to a magnitude of two, values of one and three are also sometimes used. Based on the skewness and kurtosis results, skewness was less than one and kurtosis was less than three indicating that the data is normally distributed (Cohen et al., 2013).

Another method using the skewness and kurtosis values is to compare the z-values with three times the standard errors. As can be seen, the skewness and

kurtosis values fell outside the three times the standard error rule. Tabachnick and Fidell (2007) stated that with large sample sizes, it is preferable to look at the shape of the distribution as standard errors of both skewness and kurtosis decrease with larger sample sizes, this can be seen in Table 4.15.

Table 4.15: Descriptive statistics

Variable	N	Mean	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Entrepreneurial training	519	6.1672	-.534	.107	.421	.214
Financial control training	519	6.2341	-.636	.107	.961	.214
ESE innovation	519	6.3148	-.620	.107	.380	.214
ESE financial control	519	6.3382	-.611	.107	.253	.214
ESE marketing	519	6.2940	-.526	.107	-.015	.214
Valid N (listwise)	519					

Histograms depicting the skewness and kurtosis of the variables can be seen in Figures 4.18 to 4.22. The independent variables, entrepreneurial training and financial control training looked normally distributed with no skewness or kurtosis issues. The dependent variables, ESE innovation, ESE financial control and ESE marketing indicated minor negative skewness.

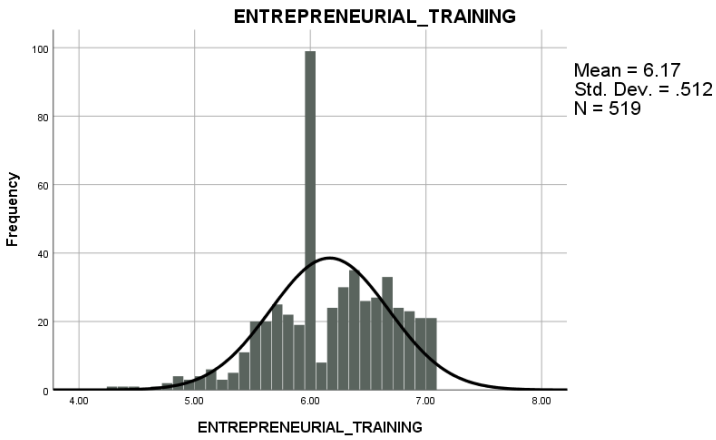


Figure 4.18: Entrepreneurial training

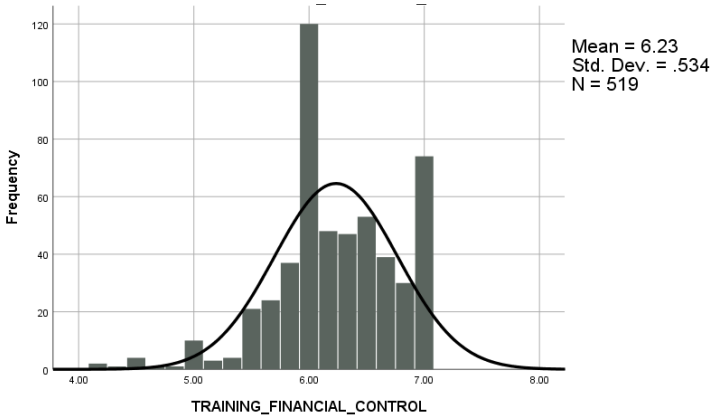


Figure 4.19: Financial control training

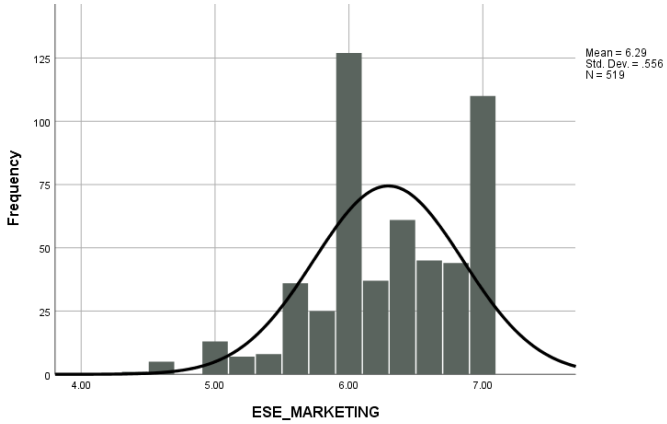


Figure 4.20: ESE marketing

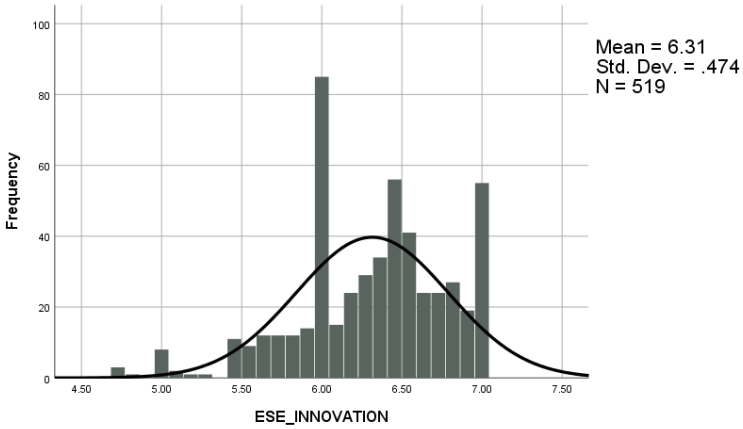


Figure 4.21: ESE innovation

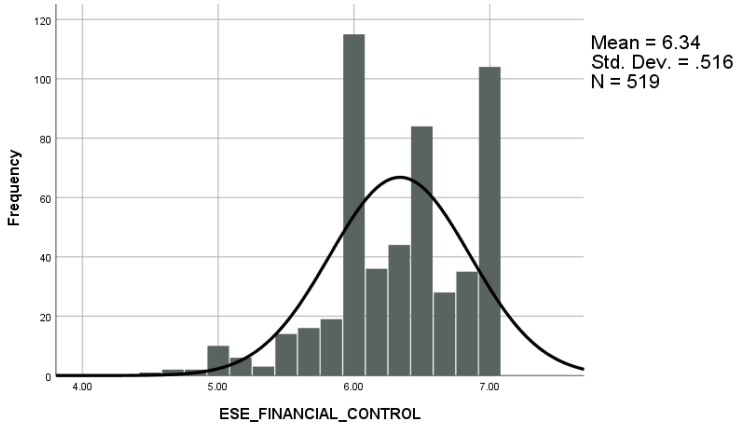


Figure 4.22: ESE financial control

Kolmogorov-Smirnov and Shapiro-Wilk tests:

To further test for normality, the Kolmogorov-Smirnov and Shapiro-Wilk tests for normality were conducted. These test the null hypothesis, that the distribution of the data is normal in shape by comparing the scores of a sample to the scores of other normally distributed set of scores with similar means and standard deviations (Field, 2018). If the test is not significant ($p > 0.05$) then it means that the sample is not significantly different from a normal distribution and if the test is significant ($p < 0.05$) then the sample is significantly different from a normal distribution. The Kolmogorov-Smirnov and Shapiro-Wilk test results in Table 4.16 both seemed to deviate from normality as $p < 0.05$ for all the variables. However, Field (2013) did not support these tests as they can show unimportant, yet significant, effects especially in large sample sizes; therefore, this study, which had a large sample, followed Field's (2013) recommendation.

Table 4.16: Kolmogorov-Smirnov and Shapiro-Wilk tests

Variable	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Entrepreneurial training	.087	519	.000	.967	519	.000
Financial control training	.123	519	.000	.935	519	.000
ESE innovation	.090	519	.000	.952	519	.000
ESE financial control	.116	519	.000	.924	519	.000
ESE marketing	.129	519	.000	.923	519	.000

a. Lilliefors Significance Correction

Pituch and Stevens (2016) advocated that with large sample sizes, it is best to collaborate the test for normality results with normality plots as well as the skewness and kurtosis descriptive statistics to conclude on the normal distribution of the data. Field (2013) was also of a similar opinion where he argues that with larger samples, the researcher should interpret the skewness and kurtosis statistics, and examine the shape of the distribution visually, the author also went as far as to recommend that the researcher not worry about normality at all if the sample size is greater than 300. Taking into consideration the skewness and kurtosis descriptive statistics, the shape of the data according to the histograms and the arguably sensitive nature of the Kolmogorov-Smirnov and Shapiro-Wilk tests of normality, it was concluded that the sampling data was normally distributed.

4.7.5 Independence of errors

The residual terms for any two observations must be uncorrelated, in other words, independent (Field, 2018). One of the assumptions in linear regression is that the errors are independent and follow a normal distribution, this implies that the respondents are not related to each other (Pituch & Stevens, 2016), or that their errors are independent of each other (Meyers, Gamst, & Guarino, 2013). The Durbin-Watson test is used to test for independence of error by testing for serial correlations between errors. The test values range between zero and four with a value of two meaning that the residuals are uncorrelated. Field (2018)

suggested that a value of two is ideal and that any value less than one or greater than three is cause for concern. As presented in Table 4.17, the associated Durbin-Watson for the three dependent variables ranged between 1.764 and 1.793 thereby meeting the cut-off of more than one and less than three; the values were very close to two indicating that the errors were not correlated.

Table 4.17: Durbin-Watson

Dependent Variable	R	R Square	Adjusted R Square	R Square Change	Durbin-Watson
ESE marketing	.647	.419	.416	.419	1.779
ESE innovation	.636	.405	.402	.405	1.793
ESE financial control	.624	.390	.387	.390	1.764

4.7.6 Multicollinearity

One way that multicollinearity can be identified is by examining the predictor variables in the correlation matrix (Tabachnick & Fidell, 2013). Multicollinearity can be found when two variables are too highly correlated, this implies that those variables contain redundant information and are therefore not needed in the same analysis. Field (2013) suggested that there is multicollinearity when variables have correlation coefficients of .80 and above. However, Tabachnick and Fidell (2013) defined multicollinearity as a bivariate correlation above .90. Table 4.14 indicated no evidence of multicollinearity as the correlation coefficients between the predictor variables was less than .80. The predictor value also correlated with the outcome value at a point greater than .30.

Collinearity diagnostics tests were also conducted to identify more subtle forms of multicollinearity, one of the tests being the variance inflation factor (VIF) test as well as the tolerance statistic test. The VIF identifies whether one predictor variable has a strong linear relationship with other predictor variables in the model (Field, 2013). The tolerance statistic is related to the VIF test and it reciprocates the VIF test in that it is calculated as 1/VIF. Field (2013) provided the guideline that the VIF should not be greater than 10 and that tolerance below 0.2 indicates a potential problem of multicollinearity. Table 4.18 shows the VIF

and tolerance statistics for the predictor variables. The results of the collinearity statistics corresponded with the results of the observation made using the correlation matrix; the VIF was well below 10 at 2.279 and the tolerance statistic was above .02 at .439; it was therefore concluded that there was no collinearity problem within the data.

Table 4.18: Collinearity statistics

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Entrepreneurial training	.439	2.279
	Financial control training	.439	2.279

4.8 Results pertaining to Hypothesis 1

In the next sub-sections, the results pertaining to the hypotheses are analysed. This study had two hypotheses; first multiple-regression analysis was conducted to assess the relationship between entrepreneurial training and financial control training and the DVs ESE innovation, ESE financial control and ESE marketing. Furthermore, an independent sample T-Test was conducted to compare the ESE of necessity- and opportunity-driven entrepreneurs by analysing ESE dimensions individually.

- *H1:* Training has a more positive impact on the ESE of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.

The first hypothesis of this study pertained to how training might have a more positive impact on the ESE of opportunity-driven entrepreneurs than it did on the ESE of necessity-driven entrepreneurs. Correspondingly, according to Baptista and Karaöz (2006), factors such as gender, education, management experience, industry experience, and whether or not an entrepreneur goes into business on their own or in a partnership (also called partnerships), have an impact on firm survival. The research by these authors motivated this study to incorporate these

factors as control variables to single out the unique contribution of the independent variables after the control variables had been removed.

The training construct was adopted from the ESE instrument developed by Chen et al. (1998), the research instrument was then adapted to test for training in reference to the different dimensions that fall under ESE, for instance, marketing training would measure ESE marketing and innovation training would measure ESE innovation, and so forth. Training initially had five dimensions: training in marketing, innovation, management, risk-taking and financial control. During the EFA, the five factors refused to converge into the initial five factors. The items for training in marketing, innovation, management and risk-taking converged into a factor that was renamed entrepreneurial training and thus became a general training factor and the financial control items converged into the second factor, a task-specific factor, which retained its name. With regard to ESE, the initial five dimensions of ESE converged into three factors: ESE in marketing, innovation and financial control.

The EFA results therefore imposed a limit that resulted in Hypothesis 1 and the relevant sub-hypotheses having to be amended. A new hypothesis therefore emerged, testing for the impact of general entrepreneurial training on the ESE dimensions while controlling for gender, education, management experience, industry experience, and partnerships. Since the task-specific financial control was the only dimension that sustained both its training and ESE factors, that hypothesis was tested as initially planned.

In order to test the first hypothesis, multiple linear regression was applied to the data set while controlling for the confounding variables gender, education, management, industry experience, and partnerships. To determine the impact of training on necessity- and opportunity-driven entrepreneurs, a selection variable was also applied, which enabled the analysis of the two groups of entrepreneurs separately. The structure of the regression analysis was broken down into sub-hypotheses and each sub-hypothesis was a comparison of the impact of training on the two types of entrepreneurs.

4.8.1 Hypothesis 1a

- Entrepreneurial training has a more positive impact on the ESE marketing of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.

To determine whether entrepreneurial training had a more positive impact on opportunity-driven than it did on necessity-driven entrepreneurs, the standardised coefficients beta values obtained in the regression analysis were used to deduce statistical inferences.

According to Table 4.19, the results obtained in the comparison of the impact of entrepreneurial training on the ESE marketing of necessity- and opportunity-driven entrepreneurs revealed that the control variables made a higher contribution towards the model in necessity-driven entrepreneurs. The control variables accounted for 13.7 per cent of the variance in the outcome variable ESE marketing whereas they only accounted for 0.078 for opportunity-driven entrepreneurs. Taking into account the predictor variables and the control variables together, ` had a slightly higher impact on opportunity-driven entrepreneurs; they accounted for 45.4 per cent of the variability in ESE marketing. The R^2 Change value in Model 2 indicated the variance in the outcome variable ESE marketing; the predictor variables, after the effects of the control variables had been removed, made a higher contribution towards opportunity-driven entrepreneurs, the predictor variables explained 37.6 per cent of the variance of the outcome variable for opportunity-driven entrepreneurs after the effects of the control variables had been removed, for necessity-driven entrepreneurs it was 28.9 per cent.

The model also indicated that the predictor variables had a statistically significant contribution to predicting ESE marketing for both necessity- and opportunity-driven entrepreneurs. The p-value under ANOVA indicated that the model as a whole is a statistically significant predictor of ESE marketing.

For necessity-driven entrepreneurs, the control variables made the following unique contributions to the variance of the outcome variable: gender 14.7 per

cent, education 5.7 per cent, management 1.5 per cent, industry experience 11.3 per cent, and partnerships 6.4 per cent. Education and management had a negative effect on the impact of training on the ESE marketing of the respondents, meaning that the higher the education level and management experience of the respondents, the less likely it was that participation in training improved their ESE marketing. None of the control variables made a statistically significant contribution to the variance in ESE marketing.

For opportunity-driven entrepreneurs, the control variables made the following unique contributions: management experience 12.6 per cent, industry experience 7.1 per cent, gender three per cent, education 2.2 per cent and partnership 1.8 per cent. Gender, education and partnerships had a negative effect on ESE innovation. Management made the biggest contribution of the control variables and that contribution was statistically significant, meaning that management experience was crucial if an opportunity-driven entrepreneur was to use entrepreneurial training to increase their ESE marketing.

There were two variables that made a statistically significant and unique contribution to ESE marketing, those being the predictor variables, entrepreneurial training and training in financial control. The control variable management experience made a higher, positive, and significant contribution to the model for opportunity-driven entrepreneurs. Entrepreneurial training made the largest unique contribution for opportunity-driven entrepreneurs explaining 51.7 per cent of the variance in ESE marketing, and training in financial control accounted for the most variance of 28.9 per cent of necessity-driven entrepreneurs.

Finally, a unit change in entrepreneurial training for necessity-driven entrepreneurs resulted in a significant positive 34.7 per cent change in the ESE marketing of necessity-driven entrepreneurs while it was a positive, moderate, significant 51.7 per cent change in the ESE marketing of opportunity-driven entrepreneurs. The hypothesis was therefore accepted that entrepreneurial training had a more positive significant impact on the ESE marketing of opportunity-driven entrepreneurs than it did on necessity-driven entrepreneurs.

Table 4.19: Impact of entrepreneurial training on ESE marketing

Variable		Necessity-driven entrepreneurs	Opportunity-driven entrepreneurs
Model Summary	*Model 1 R²:* Control variables	.137	.078
	Model 2 R²: Control variables + independent variables	.425	.454
	Model 2 R² Change: Predictor variables less control variables	.289	.376
	Model 2 Sig	p<0.05	p<0.05
ANOVA	Model 2 Sig	.000	.000
Coefficients	Gender	.147	-.030
	Education	-.057	-.022
	Management experience	-.015	.126
	Industry experience	.113	.071
	Number of owners at inception	.064	-.018
	Entrepreneurial training	.347	.517
	Financial control training	.289	.147

4.8.2 Hypothesis 1b

- Entrepreneurial training has a more positive impact on the ESE innovation of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.

Table 4.20, pertaining to ESE innovation, indicated that the control variables account for the most variance of 13.2 per cent in the outcome for necessity-driven entrepreneurs, together with the predictor variables they accounted for 49.3 per cent, whereas they accounted for eight per cent and 41.6 per cent in opportunity-driven entrepreneurs, respectively. The variance that was explained by the predictor variables after the effects of the control variables were removed was 36 per cent for necessity-driven entrepreneurs and 33.6 per cent for opportunity-driven entrepreneurs, and the contribution of the predictor variables in predicting

the outcome was also significant at $p < 0.05$ for both necessity- and opportunity-driven entrepreneurs.

The p-value under ANOVA indicated that the model as a whole was a statistically significant predictor of the outcome variable, ESE innovation.

For necessity-driven entrepreneurs, the control variables do not make a statistically significant contribution to the model. The contribution made by the control variables was gender 10 per cent, partnerships 8.5 per cent, industry experience 69 per cent, management 0.4 per cent, and education 0.2 per cent. Education had a negative impact on ESE innovation. Gender accounted for the largest unique contribution for the control variables and the remainder of the control variables only accounted for a very small variation in the ESE innovation of necessity-driven entrepreneurs.

For opportunity-driven entrepreneurs, three control variables, management experience, industry experience and education made statistically significant contributions to the model. The largest unique contributor in the control variables was management experience 12.6 per cent, followed by industry experience 9.5 per cent, education eight per cent, partnerships 4.5 per cent and gender 4.1 per cent. Gender, education and partnerships made a negative impact on the ESE innovation of opportunity-driven entrepreneurs. Two control variables made significant contributions to the outcome and these control variables made the largest unique contributions to ESE innovation of opportunity-driven entrepreneurs compared to the other ESE dimensions.

With regard to how each of the independent variables contributed to the final model for necessity-driven entrepreneurs, the two predictor variables were the only two variables that made a statistically significant contribution to the model. Training in financial control made the largest contribution of 40.1 per cent to the ESE Innovation of opportunity-driven entrepreneurs when the control variables were removed, whereas entrepreneurial training only contributed 31 per cent.

The results obtained for the ESE innovation of opportunity-driven entrepreneurs, indicated that the two predictor variables made statistically significant

contributions to the model while the remainder of the control models did not. Entrepreneurial training made the largest unique contribution of 40.2 per cent when the effect of the control variables were removed and training in financial control contributed 23.5 per cent of the variance in the model.

Comparing the impact of entrepreneurial training on the ESE innovation of necessity- and opportunity-driven entrepreneurs indicated that a unit change in entrepreneurial training for necessity-driven entrepreneurs resulted in a significant positive, modest 31 per cent change in the ESE innovation of necessity-driven entrepreneurs, the change in opportunity-driven entrepreneurs was a significant positive, moderate 40.2 per cent. Hypothesis 1b was therefore supported; entrepreneurial training had a more positive impact on the ESE innovation of opportunity-driven entrepreneurs than it did on necessity-driven entrepreneurs, and that impact was significant.

Table 4.20: Impact of entrepreneurial training on ESE innovation

Variable		Necessity-driven entrepreneurs	Opportunity-driven entrepreneurs
Model Summary	*Model 1 R^2:* Control variables	.132	.080
	Model 2 R^2: Control variables + independent variables	.493	.416
	Model 2 R^2 Change: Predictor variables less control variables	.360	.336
	Model 2 Sig	.000	.000
ANOVA	Model 2 Sig	.000	.000

Variable		Necessity-driven entrepreneurs	Opportunity-driven entrepreneurs
Coefficients	Gender	.100	-.041
	Education	-.002	-.080
	Management experience	.004	.126
	Industry experience	.069	.095
	Number of owners at inception	.085	-.045
	Entrepreneurial training	.310	.402
	Financial control training	.401	.235

4.8.3 Hypothesis 1c

- Entrepreneurial training has a more positive impact on the ESE management of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.

This hypothesis could not be tested as the ESE management items declined to load into one factor. ESE management (2) loaded under ESE innovation, ESE management (5) loaded under ESE financial control, but was removed during reliability testing as deleting the item improved the reliability of the scale, ESE management (1,3, and 4) did not make the .4 cut-off and therefore refused to load.

4.8.4 Hypothesis 1d

- Entrepreneurial training has a more positive impact on the ESE risk-taking of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.

Similar to Hypothesis 1c, this hypothesis could not be tested as all the ESE risk-taking items loaded under ESE innovation. As the ESE innovation and ESE risk-taking items, as well as ESE management (2) merged under one factor, the factor was renamed ESE innovation, as ESE innovation had the most items, six, whereas ESE risk-taking had only four.

4.8.5 Hypothesis 1e

- Financial control training has a more positive impact on the ESE financial control of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.

In evaluating whether the model was able to predict the ESE financial control outcome of necessity-driven and opportunity-driven entrepreneurs, Table 4.21 indicates that the control variables accounted for 16.6 per cent of the variance in the outcome for necessity-driven entrepreneurs, together with the predictor variables, the variables accounted for 40.6 per cent of the variance in the outcome and the predictor variables, when removing the effect of the control variables explained 27 per cent of the variance in the outcome. For opportunity-driven entrepreneurs the control variables accounted for 7.6 per cent of the variance in the outcome, while together with the predictor variables they accounted for 42 per cent of the variance in the outcome. The predictor variables on their own explained 34.4 per cent of the variance in the outcome and the predictor variables and control variables together made a statistically significant contribution to predicting the outcome. The predictor variables had a statistically significant contribution to predicting the outcome for both necessity- and opportunity-driven entrepreneurs.

The p-value under ANOVA indicated that the predictor and control variables were statistically significant predictors of the outcome, ESE financial control for both necessity- and opportunity-driven entrepreneurs.

The results also revealed that only one predictor outcome, financial control training made a statistically significant contribution of 41.7 per cent to the model for necessity-driven entrepreneurs, while entrepreneurial training made a contribution of 19.4 per cent. For the first time in the regression analysis, partnerships made the largest unique contribution of 9.9 per cent among the control variables; this was followed by industry experience 9.2 per cent, gender 8.5 per cent, education four per cent, and contributing at the lowest level, management experience 0.7 per cent. This was the only time that financial control training was the only statistically significant unique contributor to the

model, and the only time it made the largest contribution. None of the control variables had a negative impact on the outcome.

In terms of the unique contributions of the predictor and control variables for opportunity-driven entrepreneurs, entrepreneurial training made the largest, statistically significant contribution of 38.8 per cent to the model, ESE financial control also made a statistically significant contribution of 25.8 per cent. Two control variables, management experience and industry experience made significant contributions to the model. The largest unique contributions by the control variables were industry experience and management experience at 9.9 per cent and 9.8 per cent respectively, followed by education 4.6 per cent, partnerships 4.2 per cent, and lastly gender 2.9 per cent. Gender and education had a negative impact on the ESE financial control of opportunity-driven entrepreneurs and contrary to the result obtained in the impact of training on the ESE financial control of necessity-driven entrepreneurs; it was entrepreneurial training and not training in financial control that had a bigger influence in the variance of the ESE financial control of opportunity-driven entrepreneurs.

Lastly, entrepreneurial training had a higher impact in the variance of the ESE financial control of opportunity-driven entrepreneurs; however, comparing the impact of financial control training on the ESE financial control of necessity- and opportunity-driven entrepreneurs, a unit change in financial control training for necessity-driven entrepreneurs resulted in a significant, positive, moderate 41.7 per cent change in the ESE financial control of necessity-driven entrepreneurs, while the change for opportunity-driven entrepreneurs was a significant, positive, modest 25.8 per cent. Since the impact of financial control training had a stronger influence on necessity-driven entrepreneurs, Hypothesis 1e was rejected.

Table 4.21: Impact of financial control training on ESE financial control

Variable		Necessity-driven entrepreneurs	Opportunity-driven entrepreneurs
Model Summary	*Model 1 R²:* Control variables	.136	.076
	Model 2 R²: Control variables + independent variables	.406	.420
	Model 2 R² Change: Predictor variables less control variables	.270	.344
	Model 2 Sig	.000	.000
ANOVA	Sig		
	Model 2	.000	.000
Coefficients	Gender	.085	-.029
	Education	.040	-.046
	Management experience	.007	.097
	Industry experience	.092	.099
	Number of owners at inception	.099	.042
	Entrepreneurial training	.194	.388
	Financial control training	.417	.258

4.9 Results pertaining to Hypothesis 2

- *H2:* The ESE of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.

The second hypothesis pertaining to this study was to compare the levels of the different dimensions of the ESE of necessity- versus opportunity-driven entrepreneurs. Table 4.22 shows that there were (97) 19 per cent necessity-driven and (422) 81 per cent opportunity-driven entrepreneurs.

Table 4.22: Group statistics: Necessity vs opportunity-driven entrepreneurs

Variable	Unemployed (before current business)	N	Mean	Std. Deviation	Std. Error Mean
ESE innovation	Yes	97	6.2849	.58397	.05929
	No	422	6.3216	.44534	.02168
ESE financial control	Yes	97	6.2646	.64359	.06535
	No	422	6.3551	.48178	.02345
ESE marketing	Yes	97	6.2309	.68759	.06981
	No	422	6.3085	.52117	.02537

Table 4.23 presents the T-test results and is elaborated on in the subsections which follow.

Table 4.23: T-Test for equality of means

Variable		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
ESE marketing	Equal variances assumed	12.243	.001	-1.240	517	.216	-.07760	.06259	-.20056	.04536
	Equal variances not assumed			-1.045	122.541	.298	-.07760	.07428	-.22464	.06944
ESE innovation	Equal variances assumed	10.918	.001	-.688	517	.492	-.03672	.05339	-.14161	.06817
	Equal variances not assumed			-.582	122.881	.562	-.03672	.06313	-.16168	.08825
ESE financial Control	Equal variances assumed	14.012	.000	-1.558	517	.120	-.09045	.05807	-.20452	.02362
	Equal variances not assumed			-1.303	121.862	.195	-.09045	.06943	-.22789	.04699

4.9.1 Hypothesis 2a

- The level of ESE marketing of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.

As presented in Table 4.22, comparing the means of ESE marketing for necessity- and opportunity-driven entrepreneurs, the mean for opportunity-driven entrepreneurs was slightly more than the mean for necessity-driven entrepreneurs. The Levene's test for equality of variances in Table 4.23 was significant at $p < 0.05$, meaning that equal variances were not assumed and that the distribution scores were not similar in shape.

Therefore $t = -1.045$, $df = 122.541$ and $p = .298$. The null hypothesis, which stated that the level of ESE marketing of opportunity-driven entrepreneurs was higher than that of necessity-driven entrepreneurs, was therefore supported, although the difference was not significant.

4.9.2 Hypothesis 2b

- The level of ESE innovation of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.

The comparison of means for the ESE innovation of necessity- and opportunity-driven entrepreneurs indicated that the ESE innovation of opportunity-driven entrepreneurs was slightly higher than the ESE innovation of necessity-driven entrepreneurs. The Levene's test for equality of variances was significant at $p < 0.05$ indicating that the variances were not equal.

Therefore $t = -.582$, $df = 122.881$ and $p = .562$. The null hypothesis, which stated that the level of ESE innovation of opportunity-driven entrepreneurs was higher than that of necessity-driven entrepreneurs was accepted, although the difference was not significant.

4.9.3 Hypothesis 2c

- The level of ESE management of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.

This hypothesis could not be tested as the items for ESE management could not converge into one factor during the factor analysis test. ESE management as a construct originally had five items. ESE management (2) converged under ESE innovation, ESE management (5) converged under ESE financial control but was dropped during the reliability test as deleting the item increased the reliability of the factor. The rest of the items under ESE management (1, 3, and 4) did not meet the .4 cut-off point.

4.9.4 Hypothesis 2d

- The level of ESE risk-taking of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.

Similar to Hypothesis 2c, Hypothesis 2d could also not be tested as the ESE risk-taking items did not converge into one unique factor. ESE risk-taking as a construct originally had four items which all loaded under ESE innovation.

4.9.5 Hypothesis 2e

- The level of ESE financial control of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.

When comparing the ESE financial control means of necessity- and opportunity-driven entrepreneurs in Table 4.22, the mean for opportunity-driven entrepreneurs was slightly more than the mean for necessity-driven entrepreneurs. The Levene's test for equal variances was also significant implying that the variances of the two groups being compared were not equal.

Taking into consideration the T-test results, t = -1.303, df = 121.862 and p = .195, this implied that the null hypothesis, which stated that the level of ESE financial

control of opportunity-driven entrepreneurs was higher than that of necessity-driven entrepreneurs was accepted, although the difference was not significant.

4.10 Conclusion

This chapter presented the results that were derived from the statistical analysis conducted in order to interpret the data that was collected. According to the results, general entrepreneurial training had a bigger impact on opportunity-driven entrepreneurs, whereas task-specific financial control training proved to have more explanatory power for necessity-driven entrepreneurs. Comparing the ESE of necessity- and opportunity-driven entrepreneurs revealed that the ESE of opportunity-driven entrepreneurs was slightly higher than the ESE of necessity-driven entrepreneurs; however, the difference was slight and not significant. The following chapter will expound on the results obtained.

CHAPTER 5: DISCUSSION OF THE RESULTS

This chapter is a nexus of the literature review presented in Chapter 2 and the empirical results obtained in Chapter 4, thereby drawing conclusions on the impact of training on the ESE of necessity- and opportunity-driven entrepreneurs as well as the differences in their ESE levels.

5.1 Entrepreneurs' profile and business characteristics

The gender split of the respondents was fairly equal at around 45 per cent for both male and female, with most of the respondents, 63 per cent belonging to the youth group (26 to 35 year age group), and 34 per cent belonging to the 18 to 25 year age group. That posed a limitation, as 97 per cent of the respondents belonged to the youth group of South Africa.

Another finding was that most of the respondents were highly educated: degrees 30 per cent, honours 27 per cent, diplomas 12 per cent, masters 10 per cent, post-matric certificate eight per cent, and PhD two per cent; which meant that 89 per cent of the respondents had some sort of qualification after matric. This is similar to the statistics on the state of small business in South Africa; around half of the self-employed working in formal businesses have a university degree or post-matric qualification (Makgetla, Philip, & Fotoyi, 2019). According to the TIPS Report (TIPS, 2017), the likelihood of owning a small business increases with education level. Galawe (2017, p. 201) found similar results and attributed this finding to the "survey's geographic focus area", explaining that developed provinces have predominantly urban entrepreneurs. Ninety six per cent of the respondent's businesses were located in the Gauteng province this can be attributed to the fact that the respondents were mined from the C4G database; a company based in an affluent suburb in Johannesburg, South Africa. Johannesburg is a highly urbanised city located in the Gauteng province, which is considered the economic hub of South Africa; it has the highest concentration of formal small businesses, 40 per cent, even though only 25 per cent of the population reside there (TIPS, 2017).

Another finding was that 69 per cent of the businesses had reached the established business phase; this meant that their businesses had been running for more than 3.5 years. This is a pivotal milestone according to Singer et al. (2018), as only 2.2 per cent of businesses in South Africa make it to this stage. This explains why an 81 per cent majority of the respondents were opportunity-driven entrepreneurs, while only 19 per cent were necessity-driven. The respondents came from the age group of the most active entrepreneurs, 89 per cent being highly educated, and 69 per cent having reached the established phase; as only a minute fraction of businesses in South Africa reach this stage, it is clearly characteristic of opportunity-driven entrepreneurship (Block, Sandner et al., 2015).

Another finding that poses a limitation is that 75 per cent of the respondents were black, when only about half of the businesses in South Africa are black-owned (Makgetla et al., 2019). The South African apartheid regime, through its objective of racial segregation, left a legacy in South Africa where the majority of its citizens are uneducated and unable to participate is the country's economy. This led the government of the new regime to minimise the inequality by designing a vehicle that would bridge the gap between the high unemployment rate and economic growth. Through its enterprise development strategy and implementation of the Broad-Based Black Economic Empowerment initiative, the government targeted the previously disadvantaged using vehicles such as having a minimum 40 per cent black ownership requirement for businesses, preferential procurement from and preferential investment in businesses that are black-owned (RSA, 2014).

Considering that the majority of the respondents were highly educated, opportunity-driven entrepreneurs that had the expertise to take advantage of market opportunities (Block, Sandner, et al., 2015), it made sense that 75 per cent of the respondents were African, and that they had taken advantage of BDS training, which has been specifically targeted at assisting them in their entrepreneurial ventures.

5.2 Discussion pertaining to Hypothesis 1:

In the next two sections, the results from the two hypotheses of the study are discussed in relation to literature. The study's first objective was to determine the impact of training on the ESE of necessity- and opportunity-driven entrepreneurs with the hypothesis that training will have a more positive impact on the ESE of opportunity-driven entrepreneurs than it does on the ESE of necessity-driven entrepreneurs. The second objective was to determine the ESE of necessity- and opportunity-driven entrepreneurs, hypothesising that the ESE of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs. The hypotheses were divided into sub-hypotheses according to the five ESE dimensions and are discussed accordingly.

- *H1:* Training has a more positive impact on the ESE of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.

A study by Lee et al. (2015) fully encapsulates the relevance of the ESE dimensions. The skills that form part of the ESE dimensions have also been attributed as reasons for business failure (Fatoki & Garwe, 2010), and as Bruwer and Smith (2018) inferred, if entrepreneurs in South Africa were to develop these skills, they would have a positive influence realising their business objectives. Because studies have proven the effects of training on raising ESE, including an individual's ESE being raised through education and training (Mueller & Goic, 2002; Zhao et al., 2005), the first hypothesis of this study sought to determine the impact that training would have on the ESE of necessity- and opportunity-driven entrepreneurs, with the proposition that training would have a bigger impact on the ESE of opportunity-driven entrepreneurs. There is a gap in extant literature that looks at the impact of training on the ESE of necessity- and opportunity-driven entrepreneurs, this limits the ability of the study to fully merge past empirical results with the results obtained in this study.

5.2.1 Hypothesis 1a

- Entrepreneurial training has a more positive impact on the ESE marketing of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.

The hypothesis stated that entrepreneurial training had a more positive impact on the ESE marketing of opportunity-driven entrepreneurs than it did necessity-driven entrepreneurs. This hypothesis was supported, and findings suggested that general entrepreneurial training was better suited for opportunity-driven entrepreneurs.

This was in line with the findings that ESE can be improved through training (Florin et al., 2007; Mueller & Goic, 2002; Zhao et al., 2005). However, this study made a unique contribution in determining how that training pertained to the ESE of necessity- and opportunity-driven entrepreneurs.

Marketing is an essential skill that managers need to possess. As illustrated in the research study by Lee et al. (2015), to introduce new products into the market that will compete with rival products, superior marketing capability is required (O'Dwyer, Gilmore, & Carson, 2009). Sok, O'Cass, and Sok (2013) argued that the competitiveness of SMEs is dependent on marketing capability, being small and nimble necessitates SMEs to offer tailored products that will cater to the specific needs of customers. This requires managers that are creative and geared towards "initiating and managing organisational change" (Murray, 1981, p. 95).

Marketing is an essential activity; it can satisfy customer needs and requires entrepreneurs to pursue creative and innovative marketing activities (Morrish, 2011), which will increase the probability of business performance and survival (Morrish, 2011; Sok et al., 2013). Filho and Borges (2019) have proved that engaging in marketing activities and initiating dialogue with customers is opportune for businesses to introduce their product ideas, especially in their first year of operation. These businesses are found to perform better in terms of

profitability and sales and they manage to attract and retain their customers (Lado, Duque, & Alvarez Bassi, 2013).

Marketing no longer embraces the traditional notion of a focal point in marketing activities geared towards meeting the needs of the target market; it has evolved into a concept called entrepreneurial marketing that recognises the entrepreneur as being a central actor in the entire process (Morrish, 2011). Entrepreneurial marketing places the emphasis not only on the customer, but also on the entrepreneur, as it is the entrepreneur that formulates the strategies of the organisation; marketing is one of the tools that the entrepreneur uses to implement those strategies.

5.2.2 Hypothesis 1b

- Entrepreneurial training has a more positive impact on the ESE innovation of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.

The hypothesis that entrepreneurial training had a more positive impact on the ESE innovation of opportunity-driven entrepreneurs than it did on necessity-driven entrepreneurs was supported. There are limited studies on the impact of training on ESE innovation of necessity- and opportunity-driven entrepreneurs. Darnihamedani and Hessels (2016) found that necessity-driven entrepreneurs with high levels of education were more likely to participate in innovative entrepreneurial tasks. Considering the differences in this study's results for necessity- and opportunity-driven entrepreneurs, this fell outside its scope, and although similar results might have been found by this study, the results were not conclusive. The results of this study therefore made a unique contribution in suggesting that to increase the ESE innovation of entrepreneurs, entrepreneurial training would be more effective for opportunity-driven entrepreneurs.

Innovation and economic growth are often interlinked with innovation preceding economic growth, the results of this study bear similarities with findings that necessity-driven entrepreneurship does not make as significant a contribution to economic growth as does opportunity-driven entrepreneurship (Acs & Varga,

2005; Wennekers et al., 2005; Wong et al., 2005). The findings of this study could contribute to findings in extant literature by positing that the differences in contribution be attributed to differences in the ESE of necessity- and opportunity-driven entrepreneurs.

Innovations can be either radical or incremental; radical innovations are completely new ideas and products that have a new set of customer groups, while incremental innovation is the adaptation of new ways to old technology (Morrish, 2011). According to Sok et al. (2013), superior innovation ability is vital in contributing to firm performance; therefore, technological innovation has been established as a contributor to economic growth. However, not all entrepreneurs are innovative, in fact the majority of new ventures are not innovative at all (Autio, Kenney, Mustar, Siegel, & Wright, 2014). Only a small proportion, roughly five per cent, of entrepreneurs engage in significant innovative activities (Baumol, 2005). Innovation capability is very important and able to give an organisation competitive edge against competitors, thereby enabling superior performance (Sok et al., 2013)

Terziovski (2010) found that if SMEs were to adopt an innovation culture and strategy, their performance would increase. Because of their small size and nimbleness, SMEs have the advantage of being flexible and quick to introduce new innovative products to keep up with constantly changing market needs (Sok et al., 2013).

5.2.3 Hypothesis 1c

- Entrepreneurial training has a more positive impact on the ESE management of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.

Many studies have proved that management skills are vital for entrepreneurs and others have attributed a lack of management skills as one of the reasons why businesses fail (Mudavanhu et al., 2014; Rogerson, 2008). As illustrated by Lee et al. (2015), managers need to provide the vision of the company and come up with the strategy that they will implement in order for the organisation to reach its

objectives. The entrepreneurial environment is characterised by a complexity and dynamism that requires management to foresee scenarios that can occur and therefore develop strategies that are required, this means using strategy to reposition entrepreneurial action, thereby allowing organisations to take over new positions in the market (Urban, 2012b).

This hypothesis stated that entrepreneurial training had a more positive impact on the ESE management of opportunity-driven entrepreneurs than it did on necessity-driven entrepreneurs. Similar to this hypothesis, Radipere and Van Scheers (2005) were of the view that management skills can be improved through training. This hypothesis could not be tested due to the failure of the ESE management items refusing to load during EFA. There are no results pertaining to the impact of entrepreneurial training on the ESE management of necessity- and opportunity-driven entrepreneurs, thus imposing a limitation on this study.

5.2.4 Hypothesis 1d

- Entrepreneurial training has a more positive impact on the ESE risk-taking of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.

As illustrated in the study by Lee et al. (2015), risk-taking is an inevitability that faces entrepreneurs that seek to grow their businesses, and the ability to overcome the elusive risk environment determines the survival of the organisation. Managerial risk-taking is a critical part of strategic management and in order for managers to improve the performance of businesses and gain competitive advantage they need to take risks (Hoskisson, Chirico, Zyung, & Gambeta, 2017). As stated in the literature review, Block, Sandner, et al. (2015) found that opportunity-driven entrepreneurs were more willing to take risks. This hypothesis could not be tested as the ESE risk-taking items converged with the ESE innovation items, which could have been because the of the bias of opportunity-driven entrepreneurs viewing the environment as full of opportunities, rather than as being risky (McGee et al., 2009). The results can therefore not be expounded on, thus posing a limitation to the study.

5.2.5 Hypothesis 1e

- Financial control training has a more positive impact on the ESE financial control of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.

This hypothesis is the only one whose initial dimensions, financial control training and ESE financial control held, and could therefore be tested. Due to the bias of the majority of respondents being opportunity-driven, it could be that due to the explanatory power that entrepreneurial training had on opportunity rather than necessity-driven entrepreneurs, entrepreneurial training that was initially intended to be ESE dimension-specific, converged into one scale because opportunity-driven entrepreneurs viewed all types of business training as one in the same thing. Financial control training was the only construct that was upheld, perhaps because accounting as a practice is very specific. This implied that unlike a more general construct, entrepreneurial training, this hypothesis tested for the impact of task-specific training.

The hypothesis stated that financial control training had a more positive impact on the ESE financial control of opportunity-driven entrepreneurs than it did on necessity-driven entrepreneurs. The hypothesis was rejected as financial control training had a greater impact on necessity- rather than opportunity-driven entrepreneurs. This suggested that task-specific financial control training is more effective in necessity-driven entrepreneurs.

The study by Urban (2012b) found similar results; the author found that there was no statistically significant relationship between ESE for implementing finances and competitiveness. The author attributed the reason to the respondents' lack of belief in their ability to execute financial management duties. However, because in this study financial control training was found to be more effective in necessity-driven entrepreneurs, it could be that the opportunity-driven respondents already had the financial knowledge, as most of the respondents had very high education levels, hence the lower level of effectiveness of the task-specific training.

Financial management is one of the skills needed for a business to be developed, attain viability, and succeed (Radipere & Van Scheers, 2005); it is recommended as one of the skills that should be incorporated into entrepreneurial training programmes (Afolabi & Macheke, 2012). However, Mudavanhu et al. (2014) cautioned that inadequate training programmes could lead to ineffective results and as a result emphasise the need for quality training programmes. Financial capital is one of the most noticeable resources that can create a buffer against environmental shocks that businesses go through in their pursuit of strategies, and specifically capital strategies (Cooper, Gimeno-Gascon, & Woo, 1994). Therefore, financial control is one of the most crucial skills and as proved in the study by Lee et al. (2015) it enables businesses to survive attacks.

5.2.6 Hypothesis 1 conclusion

One of the factors that motivated the study to determine the impact of training on the ESE of necessity- and opportunity-driven entrepreneurs was to identify which dimension of ESE was more important for which type of entrepreneur. Taking the results of the first hypothesis into consideration, it seemed entrepreneurial training was better suited for opportunity-driven entrepreneurs; however, financial control training had more impact on necessity-driven entrepreneurs. The EFA resulted in training in financial control being the only training dimension that was upheld, which indicated that this type of training was more effective on necessity-driven entrepreneurs. It would have been interesting to see how the other ESE dimension-specific training impacted necessity- and opportunity-driven entrepreneurs. As it stands, it can only be assumed that general entrepreneurial training is more effective in opportunity-driven entrepreneurs and that task-specific training is more effective in necessity-driven entrepreneurs, but no conclusive recommendation can be made on which ESE dimension is more important for which type of entrepreneur. Table 5.1 is a summary of the different training types and their effect on the different ESE dimensions of necessity- and opportunity-driven entrepreneurs.

Table 5.1: Summary of training impact

Training type	ESE	Necessity	Opportunity
Entrepreneurial training	ESE marketing	.347 *	.517 *
Entrepreneurial training	ESE innovation	.310 *	.402 *
Entrepreneurial training	ESE management		
Entrepreneurial training	ESE risk-taking		
Financial control training	ESE financial control	.417 *	.258 *

*Significant at a 95 per cent confidence level

These empirical results are reflected in the study by Block and Wagner (2010) who found that general human capital has high explanatory power in opportunity-driven entrepreneurs and that specific human capital is more effective in necessity-driven entrepreneurs. This study found similar results regarding the impact of training. General entrepreneurial training was more effective for opportunity-driven entrepreneurs, whereas task-specific training was more effective and suitable for necessity-driven entrepreneurs.

5.3 Discussion pertaining to Hypothesis 2

- *H2:* The ESE of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.

The study hypothesised that the ESE levels of opportunity-driven entrepreneurs were higher than the ESE levels of necessity-driven entrepreneurs. This hypothesis was formulated from literature, which states that ESE is an individual's confidence in their ability to successfully carry out entrepreneurial tasks and duties (Chen et al., 1998); this includes tasks such as launching new ventures, and seeing the environment as full of opportunities rather than risks (McGee et al., 2009). These effects were very characteristic of opportunity-driven entrepreneurship. The question was whether these results are exclusive to opportunity-driven entrepreneurs, necessity-driven entrepreneurs, or both. Very limited research covers ESE, and its relationship with necessity- and opportunity-

driven entrepreneurship; the results of this hypothesis assisted in a better understanding.

5.3.1 Hypothesis 2a

- The level of ESE marketing of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.

This study wanted to determine if developing the ESE of active entrepreneurs through training would result in different ESE levels for necessity- and opportunity-driven entrepreneurs. The hypothesis stated that the level of ESE marketing of opportunity-driven entrepreneurs was higher than that of necessity-driven entrepreneurs. According to the results of the study, the findings hold true although the difference in the ESE levels were not significant. Necessity- and opportunity-driven entrepreneurship had a very small impact in the variation of ESE marketing. This means that many other factors affected the ESE of necessity- and opportunity-driven entrepreneurs.

5.3.2 Hypothesis 2b

- The level of ESE innovation of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.

This hypothesis stated that the level of ESE innovation of opportunity-driven entrepreneurs was higher than that of necessity-driven entrepreneurs. The results are as hypothesised, the ESE innovation of opportunity-driven entrepreneurs was slightly higher than that of necessity-driven entrepreneurs; however, the difference was not significant.

5.3.3 Hypothesis 2c

- The level of ESE management of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.

During the EFA, three of the ESE management items did not load and two converged under two different factors. Looking at the questions for ESE

management in the research instrument, their refusal to load could be because respondents did not interpret the questions as relating to management. As a result, this hypothesis could not be tested, and there were no results to discuss. Management plays a huge role in entrepreneurship and business success. A lack of management skills has been stated as one of the main reasons why businesses fail (Bruwer & Smith, 2018; Fatoki & Garwe, 2010; Mudavanhu et al., 2014; Rogerson, 2008); it would have been enlightening to see the different ESE management levels of necessity- and opportunity-driven entrepreneurs.

5.3.4 Hypothesis 2d

- The level of ESE risk-taking of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.

This hypothesis was not tested as the ESE risk items converged with the ESE innovation scale. One of the limitations of this study was that 81 per cent of the respondents are opportunity-driven entrepreneurs. According to McGee et al. (2009) one of the characteristics of people with high ESE is that they perceive the environment as full of opportunities, rather than being risky; they also believe that they can achieve their goals and perceive only small probability for failure. The convergence of the ESE innovation and ESE risk into one scale could be due to the bias in the large number of respondents being opportunity-driven entrepreneurs. The assumption was that opportunity-driven entrepreneurs had high ESE and looking at the structure of the questioning pertaining to the ESE innovation and ESE risk-taking constructs, it could be deduced that the respondents interpreted the questions in a similar manner.

Mitchell, Busenitz, Lant, McDougall, Morse, and Smith (2002, p. 97) defined entrepreneurial cognitions as the “knowledge structures that people use to make assessments, judgements, or decisions involving evaluation, venture creation and growth”. Barreira et al. (2016, p. 6) further explained that entrepreneurs use “simplifying mental models” that help them in environmental and contextual uncertainty to gather resources, create new products and services, and pursue opportunities. The entrepreneurial scripts and cognitive biases that have a huge impact in entrepreneurial decision-making (Barreira et al., 2016), could explain

why the majority of the respondents, who were opportunity-driven, viewed the ESE innovation and risk questions in a similar manner.

5.3.5 Hypothesis 2e

- The level of ESE financial control of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.

This hypothesis stated that the level of ESE financial control of opportunity-driven entrepreneurs was higher than that of necessity-driven entrepreneurs. The results confirmed that the hypothesis was supported; the level of ESE financial control of opportunity-driven entrepreneurs was higher than that of necessity-driven entrepreneurs although the finding was not significant.

5.3.6 Hypothesis 2 conclusion

The results for the three sub-hypotheses that could be tested were very similar; although the ESE levels of opportunity-driven entrepreneurs are higher than that of necessity-driven entrepreneurs, the difference is only slight and bears no significance. In particular, it was found that necessity- and opportunity-driven entrepreneurship made a less than one per cent impact in ESE levels. This could be attributed to the following reasons:

- Most of the study sample was located in Gauteng, the most economically dominant province in South Africa;
- Most had very high education levels;
- The majority of the sample were also owners of businesses that had already reached the established business phase, which could imply that their confidence in running their businesses had already been established.

Wood and Bandura (1989) detailed that one of the inferences of self-efficacy is that it leads people to take on tasks and challenges that they believe they can accomplish and this spills over to career choices (Chen et al., 1998). This inference supports the conclusion that the reason for the ESE of necessity- and

opportunity-driven entrepreneurs being so similar was because whether the challenge of opening a business was because they had to, or because they responded to an opportunity and took on a challenging entrepreneurial endeavour, the level of confidence was the determinant of the kind of business venture pursued. In other words, necessity-driven entrepreneurs would take on the projects that they knew they could accomplish, and opportunity-driven entrepreneurs would pursue the more risky and intricate projects that they had the confidence to do; hence, in both types of entrepreneurs there were similar levels of ESE.

It can therefore be deduced that ESE is an antecedent of the decision to follow necessity- or opportunity-driven entrepreneurship, hence necessity-driven entrepreneurs dive into the shallow waters of survivalist entrepreneurship because that is what they know they are able to achieve, while opportunity-driven entrepreneurs pursue the more strategy-requiring business ventures; their ESE predetermined their decisions.

Mauer et al. (2017) expressed a need to produce more entrepreneurs that can contribute to the economy positively. Due to the blatantly dissimilar levels of economic contribution that necessity- and opportunity-driven entrepreneurs make, perhaps the focus when it comes to ESE should be that every type of entrepreneur be confident in whatever entrepreneurial venture they feel confident to pursue. That is, rather than focusing on the quality of contribution, focusing on building a high level of ESE that will help the entrepreneur to sustain the entrepreneurial venture they have undertaken, should be just as, if not more, important. The result would be more businesses that are sustainable and a decrease in the high failure rates of businesses.

It seems this research identified the role of ESE in relation to necessity- and opportunity-driven entrepreneurship; ESE does not play the role of attempting to get the necessity-driven entrepreneur to aspire to become opportunity-driven, rather, it is about giving an entrepreneur, whether necessity- or opportunity-driven the confidence to run their business. There is a need to assist entrepreneurs to grow their businesses from the survival phase to the established

business phase (Singer et al., 2018); ESE can facilitate that objective and contribute to the sustainability of both necessity- and opportunity-driven businesses enterprises. People with high ESE put more effort into the tasks they have to complete, and persevere more, thereby allowing their ability to infer positive future performance (Chen et al., 1998). ESE therefore plays an edifying role, rather than a transformational role in necessity- and opportunity-driven entrepreneurship.

5.4 Conclusion

Hypothesis 1 was supported; entrepreneurial has a more positive impact on the ESE of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs. However, the hypothesis that was task-specific, financial control training, was rejected as it had more impact on necessity- than it did on opportunity-driven entrepreneurs, indicating that general entrepreneurial training is more effective for opportunity-driven entrepreneurs, and task-specific training could have a higher impact on necessity-driven entrepreneurs. The results of the sub-hypotheses under Hypothesis 2 were all rejected, proving that the ESE of necessity- and opportunity-driven entrepreneurs are indeed similar, ESE was therefore regarded an antecedent of both necessity- and opportunity-driven entrepreneurship and a possible contributor to business sustainability.

CHAPTER 6: KEY FINDINGS, IMPLICATIONS AND RECOMMENDATIONS

In this chapter, conclusions are drawn on the key findings, theoretical and practical recommendations based on the empirical findings are made to policymakers and educators, and lastly the limitations that were imposed on the study are reiterated and suggestions for future studies presented.

6.1 Key findings of the study

Hypothesis 1a and 1b were the only two sub-hypotheses that could test for a general entrepreneurial training, and Hypothesis 1e tested for the impact of task-specific financial control training. The results showed that general entrepreneurial training had a bigger impact on the ESE of opportunity-driven entrepreneurs, and task-specific financial control training had a greater impact on necessity-driven entrepreneurs. Since financial control training was the only task-specific training, it would have been enlightening to see what the impact of the individual training dimensions towards the related ESE dimensions was. If financial control training has more impact on the ESE financial control of necessity-driven entrepreneurs, than it did on the ESE of opportunity-driven entrepreneurs, would the results have been similar for all dimensions; could task-specific training have a bigger impact on necessity-driven entrepreneurs?

The study initially hypothesised that training would have a higher impact on opportunity-driven entrepreneurs; the ability to test the initial hypothesis would allow the study to make conclusive recommendations on task-specific training, and ascertain whether it would be better suited for necessity- or opportunity-driven entrepreneurs. The inference from the empirical results was that general entrepreneurial training is better suited for opportunity-driven entrepreneurs and task-specific training is better suited for necessity-driven entrepreneurs. This could be attributed to the education levels of the two groups of entrepreneurs. Opportunity-driven entrepreneurs could have a preference for general entrepreneurial training, which they use to brush up on the skills that they already

have; whereas, necessity-driven entrepreneurs might need task-specific training because they lack many entrepreneurial and business skills, and would have a preference and need for task-specific training.

The control variables made a statistically significant contribution to this study; the impact of training was tested for after the effect of the confounding variables gender, education, management experience, industry experience and partnerships were removed. The study found that the control variables had a significant impact in the variance of the ESE of opportunity-driven entrepreneurs in particular. In the study that Baptista and Karaöz (2006) conducted on how entrepreneurial human capital influences the chances of survival of businesses owned by necessity- and opportunity-driven entrepreneurs, the authors found that entrepreneurial human capital had an impact on entrepreneurial success; however, this only applied to opportunity-driven entrepreneurs. This study found similar results with regard to the confounding variables that were controlled for.

Management experience had the most explanatory power in the variance of the ESE of opportunity-driven entrepreneurs; for all three hypotheses that could be tested, this impact was found to be significant. The finding was that the more management experience opportunity-driven entrepreneurs had, the higher the impact of entrepreneurial training on those entrepreneurs. Industry experience also made a significant contribution, indicating that the more industry experience opportunity-driven entrepreneurs had, the more effective entrepreneurial training was for them. Gender made a statistically significant and negative contribution in the impact of entrepreneurial training on the impact of the ESE innovation of opportunity-driven entrepreneurs. Determining whether being male or female has a negative influence on the impact of ESE was beyond the scope of the study, which could be a recommendation for other studies to determine.

With regard to the second hypothesis, studies have proven that ESE can be increased through education and training (Mueller & Goic, 2002), and because this study measured the ESE of entrepreneurs after they underwent training, this study found that although the ESE levels of opportunity-driven entrepreneurs were slightly higher, the difference was not significant. This implied that the ESE

of both necessity- and opportunity-driven entrepreneurs after training was high and similar. This revealed that although the choice to pursue a career in business can be attributed to ESE (Chen et al., 1998), regardless of whether the entrepreneur is necessity-driven or opportunity-driven, both types of entrepreneurs must have decided on the type of business they wanted to establish. They must also have believed that they have the capability to execute the tasks required to operate that business.

The study found that ESE contributed to edifying the definition of necessity- and opportunity-driven entrepreneurship, and that ESE is an antecedent to necessity- and opportunity-driven entrepreneurship. Having high ESE would not transform an entrepreneur and their business venture from being necessity-driven to being opportunity-driven; rather, ESE can be used for the purpose of assisting entrepreneurs to run sustainable businesses, regardless of whether it is necessity- or opportunity-driven. The study found that having high ESE could give an entrepreneur confidence in their ability to execute entrepreneurial tasks. Because people with ESE employ extra effort and persevere more, high levels of ESE can be aimed for in an attempt to shape entrepreneurs that will endure the challenging and unpredictable entrepreneurial climate that forces many to discontinue their business, in other words, close it down. High levels of ESE can therefore contribute to the sustainability of both necessity- and opportunity-driven businesses; ESE therefore plays a developmental role for entrepreneurs and not a transformational role.

6.2 Theoretical and practical implications and recommendations

This research made a theoretical contribution to the study of necessity- and opportunity-driven entrepreneurs, although they are not personality types, they are two critical types of entrepreneurs that form the makeup of the South African entrepreneurial landscape. This study wanted to make a theoretical contribution to the study of entrepreneurship by determining the types of training suitable for necessity- and opportunity-driven entrepreneurs, and managed to do so. The study exhibited that general entrepreneurial training is more effective for

opportunity-driven entrepreneurs and that task-specific training is more effective for necessity-driven entrepreneurship.

The study also found that training has a similar effect in both necessity- and opportunity-driven entrepreneurs. This finding contributes to extant literature on BDS training and its impact on ESE, and further confirms the findings by past researchers that training can be used to increase the level of ESE; however, with the unique contribution of this study extending the findings to necessity- and opportunity-driven entrepreneurs. ESE has found an edifying role in the definition of necessity- and opportunity-driven entrepreneurship; developmental by establishing the belief of necessity- and opportunity-driven entrepreneurs in their ability to execute entrepreneurial tasks, and not transformational by converting necessity-driven entrepreneurs into opportunity-driven entrepreneurs.

Practically, there is a need to produce more entrepreneurs as they can make a positive contribution to the economy (Mauer et al., 2017). The practical implications of the study include the following:

- This study wanted to add value to BDS providers by informing them on the effectiveness of their training programmes on ESE. BDS providers can now be informed on the impact of general entrepreneurial training and task-specific training, which can assist them in the design of their training programmes. The recommendation would be that they first categorise their clients in terms of whether they are necessity- or opportunity-driven, and thereafter prescribe the relevant type of training, and second, ensure that task-specific training encompasses the ESE dimensions.

- The study also wanted to contribute to the dire state of South African businesses that struggle to make it to the established business phase. As was found in the empirical results, ESE is a recommendation for both necessity- and opportunity-driven entrepreneurs and can contribute to the entrepreneur's ability to run a sustainable business. The study therefore recommends that entrepreneurs partake in training opportunities whether to brush up on their skills or to develop them.

- The study also found that ESE can contribute to sustainable businesses. Because the ESE of an entrepreneur can be raised through education and training (Mueller & Goic, 2002), the study further determined that ESE does not play the role of converting a necessity-driven entrepreneur into an opportunity-driven entrepreneur, rather it gives the entrepreneur the confidence to execute entrepreneurial tasks, regardless of the necessity- or opportunity-driven entrepreneurial status. Policy makers should therefore include ESE training in their training programmes, raising the ESE of either type of entrepreneur can increase the entrepreneurs' ability to build sustainable businesses and help contribute towards the struggle of businesses making it to and beyond the established business phase (Singer et al., 2018).

- This study also sought to contribute practically towards entrepreneurial training programmes by knowing how differently training affects the ESE of necessity- and opportunity-driven entrepreneurs. In light of the empirical results of this study and through the contribution of one of the most defining limitations of the study, it can be inferred that general entrepreneurial training is more effective for opportunity-driven entrepreneurs and would in all likelihood serve the purpose of brushing up on the skills that opportunity-driven entrepreneurs already have, while task-specific Financial control training had a better impact on necessity-driven entrepreneurs, due to necessity-driven entrepreneurs requiring specific skills; hence, the high variance in their ESE that is explained by training.

6.3 Limitations of the study and suggestions for future research

This study is subject to a number of limitations. The gender split of the respondents was fairly equal, and their age distribution was limited to the South African youth group. Therefore the fact that the distribution on gender and age were not representative of the SMME population in South Africa poses a

limitation. The majority of the respondents belonged to the African race group, ownership by race in South Africa is represented by white people who own just below half of the formal businesses in the country (Makgetla et al., 2019); this poses a limitation that excludes the ability of using race as a control variable in the regression analysis. Studies have found that race plays a role in attributes that contribute to the success of business, the African population have low entrepreneurship participation rates in South Arica (Preisendörfer et al., 2012). This study's race population was therefore not representative of the South African entrepreneurial population group.

Moreover, the study had geographic and educational level limitations. Most of the businesses were located in the Gauteng province, the entrepreneurs were very well educated; hence, the majority being opportunity-driven. Necessity entrepreneurs only represented a small portion of the sample and therefore the study cannot make significant interpretations and comprehensive recommendations on necessity-driven entrepreneurs.

Singer et al. (2018) stated that the rate of established South African businesses are very poor. In this study, most of the businesses belonged in the established business phase. The study therefore does not represent the majority of entrepreneurs that struggle to run their businesses beyond 3.5 years of operation.

This study's initial objective was to determine the impact of training on the ESE of necessity- and opportunity-driven entrepreneurs. The results of the EFA posed severe limitations on the study; however, the results were also interesting due to the consequential amendment of the hypotheses which redirected the argument of the study. First, it could not be determined which ESE dimension was important for which type of entrepreneur. Second, general entrepreneurial training was more effective for opportunity-driven entrepreneurs, and task-specific financial control training was more effective for necessity-driven entrepreneurs; therefore, it is probable that necessity-driven entrepreneurs need task-specific training and opportunity-driven entrepreneurs a more general entrepreneurial training. A similar study where all the training and ESE dimensions are tested for would be

beneficial in validating whether specific entrepreneurial training is better suited for necessity or opportunity-driven entrepreneurs.

Although this study's objective was intended to juxtapose necessity- and opportunity-driven entrepreneurs, having a majority of opportunity-driven entrepreneurs limited the study's ability to make sound recommendations for necessity-driven entrepreneurs. The study also found that ESE could be a tool that assists entrepreneurs to run more sustainable businesses. As South Africa is plagued with necessity-driven entrepreneurs, a study that focuses on the impact of the different types of training on necessity-driven entrepreneurs would be beneficial.

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APPENDIX A: Research Instrument



Dear Sir/Madam

I am a student at Wits Business School studying towards a Master of Management in Entrepreneurship and New Venture Creation (MMENVC). I am currently doing a study on the impact of Business Development Services training on the Entrepreneurial Self-Efficacy of necessity-driven and opportunity-driven entrepreneurs. As a business owner/manager, I kindly ask for your participation in the questionnaire which will only take 10 minutes approximately to compete.

Please note that this survey is anonymous and that your responses are confidential. Should you have any queries regarding the research, please feel free to contact my supervisor Dr Jabulile Msimango-Galawe at jabulile.galawe@wits.ac.za

Should you wish to receive a copy of the research, you can contact me at 2173987@students.wits.ac.za. For your convenience, this survey can be completed on any mobile device. By clicking the “next” button below you acknowledge that your participation in this survey is voluntary and that you consent to participating in this survey.

Your assistance is much appreciated.

Sincerely,

Tshegofatso Eister

SECTION 1: CONSENT

C4G and MMENVC Wits Business School students Research Collaboration

Q1.1 Please select whether you consent with the study below:

I consent (1)	I do not consent (2)

SECTION 2: DEMOGRAPHICS

Please answer the following questions about yourself

Q2.1 What is your gender?

Male (1)	Female (2)	Other (3)

Q2.2 Please indicate your age bracket

Under 18 (1)	18-25 (2)	26-35 (3)	36-45 (4)	46-55 (5)	Older than 55 (6)

Q2.3 What is your highest level of education?

Did not matriculate (1)	Matric Certificate (2)	Post-Matric Certificate (3)
Diploma (4)	Degree (5)	Honours/Equivalent (6)
Masters/Equivalent (7)	PhD or Equivalent (8)	

Q2.4 Which race group do you belong to?

White (1)	African (2)	Coloured (3)	Indian (4)	Asian (5)	Other (6)

SECTION 3: EXPERIENCE

This section relates to your previous work and business experience:

Q3.1 Before you started this business, how many years of experience did you have as a manager?

I have no previous managerial experience (1)
1-3 Years (2)
4-6 Years (3)
7-9 Years (4)
10 years and more (5)

Q3.2 Before you started this business, how many years of experience did you have as an employee (excluding managerial experience)?

I have no previous work experience (1)
1 - 3 Years (2)
4 - 6 Years (3)
7 - 9 Years (4)
10 years and more (5)

Q3.3 Before you started this business, how many years of experience did you have as a business owner?

I have no previous business ownership experience (1)
1 - 3 Years (2)
4 - 6 Years (3)
7 - 9 Years (4)
10 years and more (5)

Q3.4 Before you started running this business, how many years of experience did you have in the industry that your current business is in?

I have no previous industry experience (1)
1 - 3 Years (2)
4 - 6 Years (3)
7 - 9 Years (4)
10 years and more (5)

Q3.5 Were you unemployed when you started running this business?

Yes (1)	No (2)

SECTION 4: BUSINESS CHARACTERISTICS

Please answer the following questions about your business

Q4.1 In which province is your business located?

Gauteng (1)	KwaZulu-Natal (2)	Eastern Cape (3)
Western Cape (4)	Northern Cape (5)	Limpopo (6)
Mpumalanga (7)	North West (8)	Free State (9)

Q4.2 How many employees do you currently employ (including the owner)?

One (1)
2-10 employees (2)
11-50 employees (3)
51 -250 employees (4)
251 employees or more (5)

Q4.3 How many owners did your business start with?

One business owner (1)	Two or more business owners (2)

Q4.4 How long has your business been operating?

3 months or less (1)
4 months - 42 months (3.5 years) (2)
more than 3.5 years (3)

SECTION 5: BDS TRAINING

This section pertains to the training that you have received from Business Development Services.

Q5.1 How many Business Development Support (BDS) programmes have you participated in?

0 (1)	1 (2)	2 (3)	3 (4)	4 (5)	5 and more (6)

Skip To: End of Block If: How many Business Development Support (BDS) programmes have you participated in? = 0

Q5.2 Please indicate the level of adequacy of the training in MARKETING covered during the BDS program you attended

(1 = extremely inadequate – 7 = extremely adequate)

MARKETING	1	2	3	4	5	6	7
Setting and meeting market share goals	☐	☐	☐	☐	☐	☐	☐
Setting and meeting sales goals	☐	☐	☐	☐	☐	☐	☐
Setting and meeting profit goals	☐	☐	☐	☐	☐	☐	☐
Establishing a position in the marketplace	☐	☐	☐	☐	☐	☐	☐
Conducting a market analysis	☐	☐	☐	☐	☐	☐	☐
Capabilities to expand my own business	☐	☐	☐	☐	☐	☐	☐

Q5.3 Please indicate the level of adequacy of the training in INNOVATION covered during the BDS program you attended

(1 = extremely inadequate – 7 = extremely adequate)

INNOVATION	1	2	3	4	5	6	7
Developing new business ideas	☐	☐	☐	☐	☐	☐	☐
Developing new products and services	☐	☐	☐	☐	☐	☐	☐
Identifying new markets and geographic territories	☐	☐	☐	☐	☐	☐	☐
Developing new methods of production or systems	☐	☐	☐	☐	☐	☐	☐
Developing new methods of marketing my business	☐	☐	☐	☐	☐	☐	☐
Developing new ways of managing my business	☐	☐	☐	☐	☐	☐	☐

Q5.4 Please indicate the level of adequacy of the training in MANAGEMENT covered during the BDS program you attended

(1 = extremely inadequate – 7 = extremely adequate)

MANAGEMENT	1	2	3	4	5	6	7
Reducing risk and dealing with uncertainty	☐	☐	☐	☐	☐	☐	☐
Strategic planning	☐	☐	☐	☐	☐	☐	☐
Managing my time by establishing goals	☐	☐	☐	☐	☐	☐	☐
Establishing and achieve goals and objectives	☐	☐	☐	☐	☐	☐	☐
Defining organisational roles and responsibilities	☐	☐	☐	☐	☐	☐	☐

Q5.5 Please indicate the level of adequacy of the training in RISK-TAKING covered during the BDS program you attended

(1 = extremely inadequate – 7 = extremely adequate)

RISK-TAKING	1	2	3	4	5	6	7
Taking calculated risks	☐	☐	☐	☐	☐	☐	☐
Making decisions under uncertainty and risk	☐	☐	☐	☐	☐	☐	☐
Taking responsibility for ideas and decisions	☐	☐	☐	☐	☐	☐	☐
Working under pressure and conflict	☐	☐	☐	☐	☐	☐	☐

Q5.6 Please indicate the level of adequacy of the training in FINANCIAL CONTROL covered during the BDS program you attended

(1 = extremely inadequate – 7 = extremely adequate)

FINANCIAL CONTROL	1	2	3	4	5	6	7
Performing financial analysis	☐	☐	☐	☐	☐	☐	☐
Developing financial systems	☐	☐	☐	☐	☐	☐	☐
Controlling costs	☐	☐	☐	☐	☐	☐	☐
Organise and maintain the financial records of my business	☐	☐	☐	☐	☐	☐	☐
Manage the financial records of my business	☐	☐	☐	☐	☐	☐	☐
Read and interpret financial records	☐	☐	☐	☐	☐	☐	☐

SECTION 6: ENTREPRENEURIAL SELF EFFICACY

Please indicate the level of confidence you have in your ability to do the following entrepreneurial tasks:

Q6.1 Please indicate the level of confidence you have in your ability to perform the following entrepreneurial tasks in MARKETING:

(1 = extremely unconfident – 7 = extremely confident)

MARKETING	1	2	3	4	5	6	7
I can set and meet market share goals	☐	☐	☐	☐	☐	☐	☐
I can set and meet sales goals	☐	☐	☐	☐	☐	☐	☐
I can set and meet profit goals	☐	☐	☐	☐	☐	☐	☐
I can establish a position in the marketplace	☐	☐	☐	☐	☐	☐	☐
I can conduct a market analysis	☐	☐	☐	☐	☐	☐	☐
I have the capabilities to expand my business							

Q6.2 Please indicate the level of confidence you have in your ability to perform the following entrepreneurial tasks in INNOVATION:

(1 = extremely unconfident – 7 = extremely confident)

INNOVATION	1	2	3	4	5	6	7
I am good at developing new business ideas	☐	☐	☐	☐	☐	☐	☐
I am good at developing new products and services	☐	☐	☐	☐	☐	☐	☐
I can identify new markets and geographic territories	☐	☐	☐	☐	☐	☐	☐
I can develop new methods of production or systems	☐	☐	☐	☐	☐	☐	☐
I can develop new methods of marketing my business	☐	☐	☐	☐	☐	☐	☐
I can develop new ways of managing my business							

Q6.3 Please indicate the level of confidence you have in your ability to perform the following entrepreneurial tasks in MANAGEMENT:

(1 = extremely unconfident – 7 = extremely confident)

MANAGEMENT	1	2	3	4	5	6	7
I can reduce risk and deal with uncertainty	☐	☐	☐	☐	☐	☐	☐

I am good at strategic planning	☐	☐	☐	☐	☐	☐	☐
I manage my time by establishing goals	☐	☐	☐	☐	☐	☐	☐
I can establish and achieve goals and objectives	☐	☐	☐	☐	☐	☐	☐
I can define organisational roles and responsibilities	☐	☐	☐	☐	☐	☐	☐

Q6.4 Please indicate the level of confidence you have in your ability to perform the following entrepreneurial tasks in RISK-TAKING:

(1 = extremely unconfident – 7 = extremely confident)

RISK-TAKING	1	2	3	4	5	6	7
I can take calculated risks	☐	☐	☐	☐	☐	☐	☐
I can make decisions under uncertainty and risk	☐	☐	☐	☐	☐	☐	☐
I can take responsibility for ideas and decisions	☐	☐	☐	☐	☐	☐	☐
I can work under pressure and conflict	☐	☐	☐	☐	☐	☐	☐

Q6.5 Please indicate the level of confidence you have in your ability to perform the following entrepreneurial tasks in FINANCIAL CONTROL:

(1 = extremely unconfident – 7 = extremely confident)

FINANCIAL CONTROL	1	2	3	4	5	6	7
I can perform financial analysis	☐	☐	☐	☐	☐	☐	☐
I can develop financial systems	☐	☐	☐	☐	☐	☐	☐
I can control costs	☐	☐	☐	☐	☐	☐	☐
I can organise and maintain the financial records of my business	☐	☐	☐	☐	☐	☐	☐
I can manage the financial records of my business	☐	☐	☐	☐	☐	☐	☐
I can read and interpret financial records	☐	☐	☐	☐	☐	☐	☐

APPENDIX B: Additional Results

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Training_Marketing (1)	519	1	7	6.19	.780
Training_Marketing (2)	519	3	7	6.12	.683
Training_Marketing (3)	519	3	7	6.15	.685
Training_Marketing (4)	519	2	7	6.10	.795
Training_Marketing (5)	519	2	7	6.17	.756
Training_Marketing (6)	519	1	7	6.17	.744
Training_Innovation (1)	519	2	7	6.21	.711
Training_Innovation (2)	519	3	7	6.16	.685
Training_Innovation (3)	519	1	7	6.15	.781
Training_Innovation (4)	519	3	7	6.17	.704
Training_Innovation (5)	519	2	7	6.22	.702
Training_Innovation (6)	519	2	7	6.19	.776
Training_Management (1)	519	1	7	6.11	.836
Training_Management (2)	519	2	7	6.15	.683
Training_Management (3)	519	2	7	6.16	.709
Training_Management (4)	519	3	7	6.10	.722
Training_Management (5)	519	3	7	6.24	.630
Training_Risk-taking (1)	519	1	7	6.20	.730
Training_Risk-taking (2)	519	2	7	6.14	.753
Training_Risk-taking (3)	519	2	7	6.18	.706
Training_Risk-taking (4)	519	2	7	6.22	.711
Training_Financial control (1)	519	2	7	6.29	.643
Training_Financial control (2)	519	1	7	6.20	.668

	N	Minimum	Maximum	Mean	Std. Deviation
Training_Financial control (3)	519	1	7	6.24	.687
Training_Financial control (4)	519	2	7	6.19	.744
Training_Financial control (5)	519	3	7	6.23	.662
Training_Financial control (6)	519	2	7	6.26	.688
ESE_Marketing (1)	519	4	7	6.34	.623
ESE_Marketing (2)	519	4	7	6.30	.638
ESE_Marketing (3)	519	4	7	6.27	.678
ESE_Marketing (4)	519	2	7	6.27	.730
ESE_Marketing (5)	519	3	7	6.29	.687
ESE_Marketing (6)	519	3	7	6.29	.735
ESE_Innovation (1)	519	1	7	6.32	.767
ESE_Innovation (2)	519	3	7	6.28	.699
ESE_Innovation (3)	519	2	7	6.29	.703
ESE_Innovation (4)	519	3	7	6.29	.650
ESE_Innovation (5)	519	3	7	6.34	.657
ESE_Innovation (6)	519	4	7	6.33	.613
ESE_Management (1)	519	2	7	6.30	.669
ESE_Management (2)	519	4	7	6.30	.619
ESE_Management (3)	519	4	7	6.32	.645
ESE_Management (4)	519	2	7	6.27	.667
ESE_Management (5)	519	1	7	6.34	.648
ESE_Risk-taking (1)	519	1	7	6.31	.653
ESE_Risk-taking (2)	519	2	7	6.30	.702
ESE_Risk-taking (3)	519	5	7	6.37	.603
ESE_Risk-taking (4)	519	3	7	6.34	.661
ESE_Financial control (1)	519	3	7	6.34	.626
ESE_Financial control (2)	519	3	7	6.29	.659

	N	Minimum	Maximum	Mean	Std. Deviation
ESE_Financial control (3)	519	1	7	6.34	.663
ESE_Financial control (4)	519	5	7	6.30	.626
ESE_Financial control (5)	519	3	7	6.37	.656
ESE_Financial control (6)	519	3	7	6.39	.635
Valid N (listwise)	519				

Reliability

Entrepreneurial Training

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.976	.976	21

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Training_Marketing (1)	119.58	295.916	.803	.732	.975
Training_Marketing (2)	119.65	296.542	.841	.788	.974
Training_Marketing (3)	119.60	297.549	.829	.736	.974
Training_Marketing (4)	119.68	294.364	.812	.728	.975
Training_Marketing (5)	119.60	296.074	.796	.717	.975
Training_Marketing (6)	119.58	298.460	.781	.680	.975
Training_Innovation (1)	119.54	298.274	.780	.679	.975

Training_Innovation (2)	119.57	299.036	.809	.709	.975
Training_Innovation (3)	119.62	296.420	.775	.648	.975
Training_Innovation (4)	119.64	293.469	.837	.756	.974
Training_Innovation (5)	119.55	295.670	.846	.782	.974
Training_Innovation (6)	119.55	296.724	.817	.741	.974
Training_Management (1)	119.65	296.216	.754	.626	.975
Training_Management (2)	119.58	299.312	.806	.709	.975
Training_Management (3)	119.59	298.680	.795	.753	.975
Training_Management (4)	119.65	298.426	.801	.724	.975
Training_Management (5)	119.50	299.432	.815	.744	.975
Training_Risk-taking (1)	119.58	296.925	.772	.688	.975
Training_Risk-taking (2)	119.63	295.991	.816	.757	.974
Training_Risk-taking (3)	119.55	299.539	.781	.686	.975
Training_Risk-taking (4)	119.52	300.031	.777	.702	.975

Financial Control Training

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.936	.936	6

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Training_Financial control (1)	30.16	21.174	.782	.651	.928
Training_Financial control (2)	30.22	21.284	.782	.649	.928
Training_Financial control (3)	30.21	20.622	.842	.736	.921
Training_Financial control (4)	30.24	20.459	.855	.757	.919
Training_Financial control (5)	30.20	21.128	.822	.713	.923
Training_Financial control (6)	30.15	21.119	.784	.690	.928

ESE Marketing

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.921	.921	5

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
ESE_Marketing (2)	24.55	10.798	.817	.690	.899
ESE_Marketing (3)	24.57	10.943	.784	.616	.905
ESE_Marketing (1)	24.53	10.532	.804	.679	.901
ESE_Marketing (4)	24.59	10.461	.777	.626	.907
ESE_Marketing (5)	24.56	10.649	.794	.644	.903

ESE Innovation

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.939	.940	11

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
ESE_Innovation (2)	62.00	47.175	.727	.585	.934
ESE_Innovation (3)	62.02	46.134	.744	.586	.933
ESE_Innovation (1)	61.97	47.412	.646	.473	.937
ESE_Risk-taking (4)	61.96	47.129	.761	.680	.932
ESE_Innovation (4)	62.01	47.159	.774	.657	.932
ESE_Risk-taking (1)	62.03	45.971	.768	.639	.932
ESE_Risk-taking (2)	62.05	45.349	.781	.714	.931
ESE_Risk-taking (3)	61.92	48.435	.727	.583	.934
ESE_Innovation (5)	61.99	46.596	.768	.627	.932
ESE_Innovation (6)	61.98	47.197	.760	.657	.932
ESE_Management (2)	62.00	48.430	.686	.488	.935

ESE Financial Control

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.933	.933	7

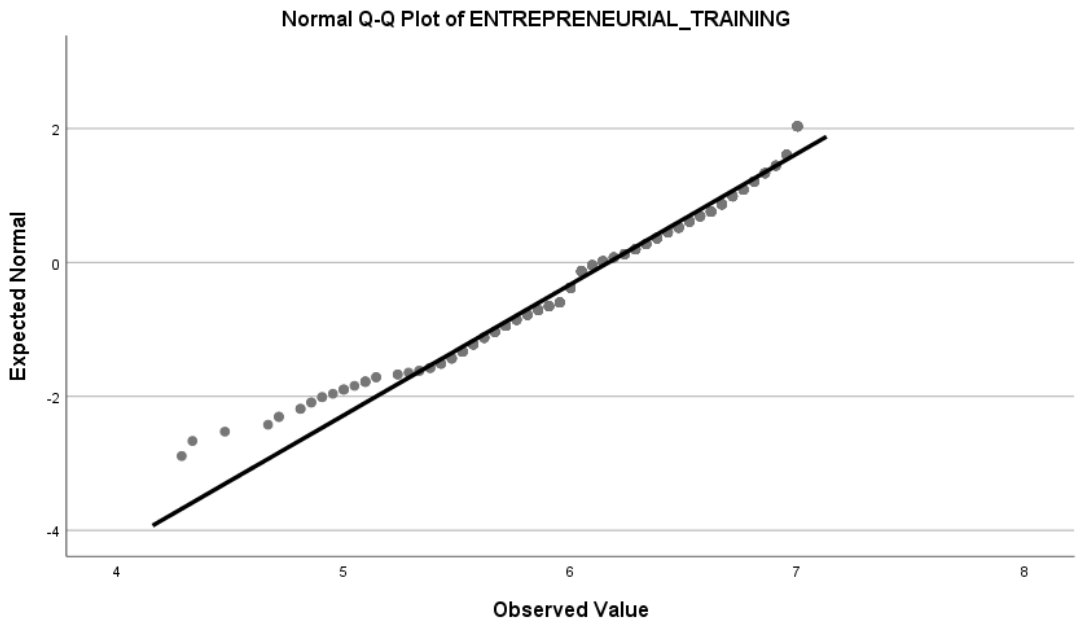
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
ESE_Financial control (1)	37.11	21.157	.778	.627	.924
ESE_Financial control (2)	37.20	20.207	.816	.690	.920
ESE_Financial control (3)	37.13	20.718	.782	.657	.923
ESE_Financial control (4)	37.16	20.792	.833	.722	.918
ESE_Financial control (5)	37.09	20.729	.822	.696	.919
ESE_Financial control (6)	37.07	20.885	.802	.710	.921
ESE_Management (5)	37.08	22.610	.660	.451	.934

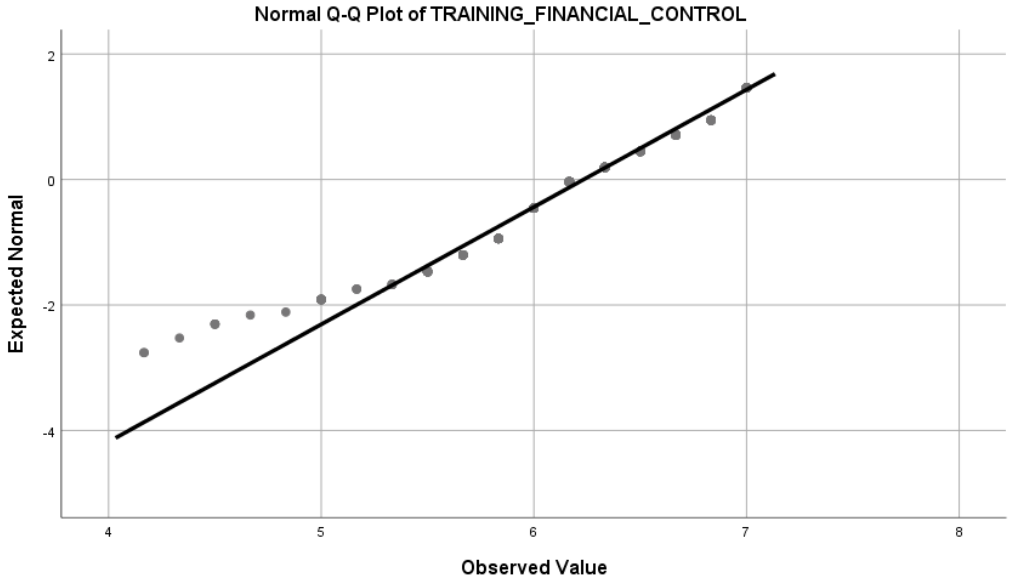
ESE financial control, after deletion

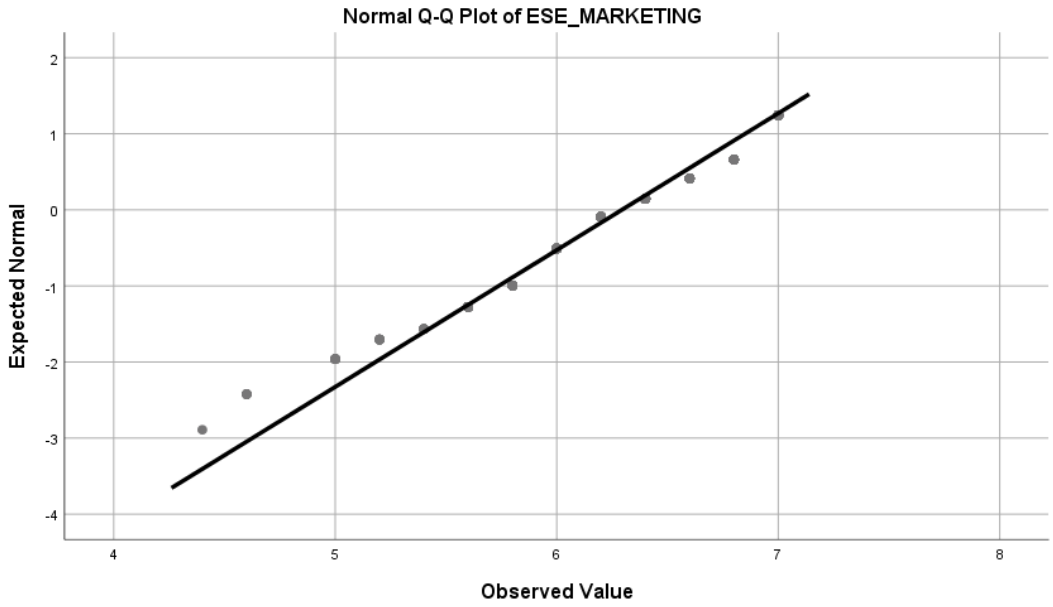
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.934	.934	6

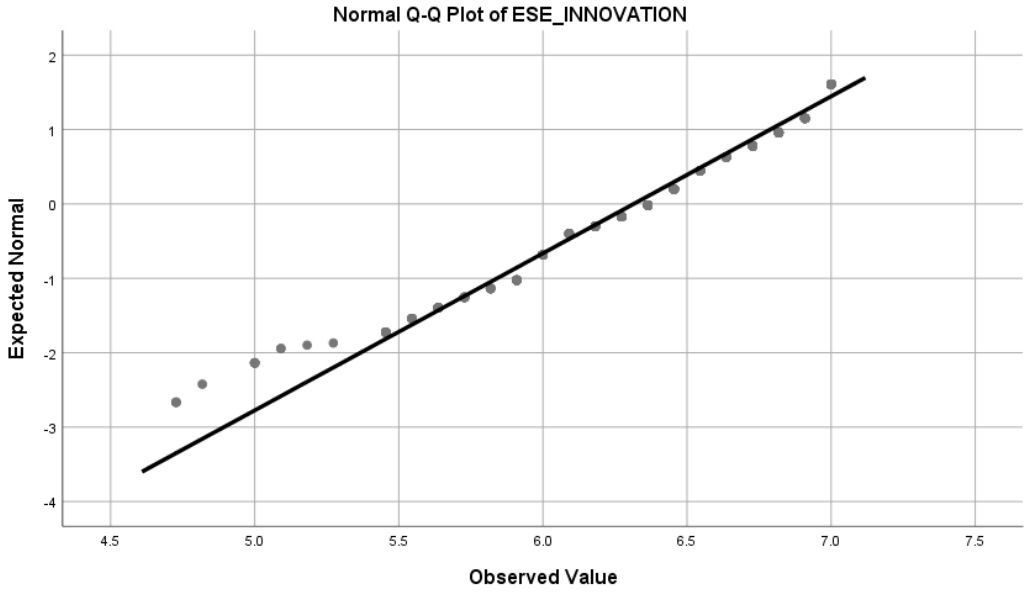
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
ESE_Financial control (1)	30.89	16.280	.775	.620	.925
ESE_Financial control (2)	30.97	15.389	.822	.690	.919
ESE_Financial control (3)	30.91	15.861	.784	.653	.924
ESE_Financial control (4)	30.94	15.927	.837	.722	.918
ESE_Financial control (5)	30.87	15.903	.820	.693	.919
ESE_Financial control (6)	30.85	16.097	.791	.694	.923

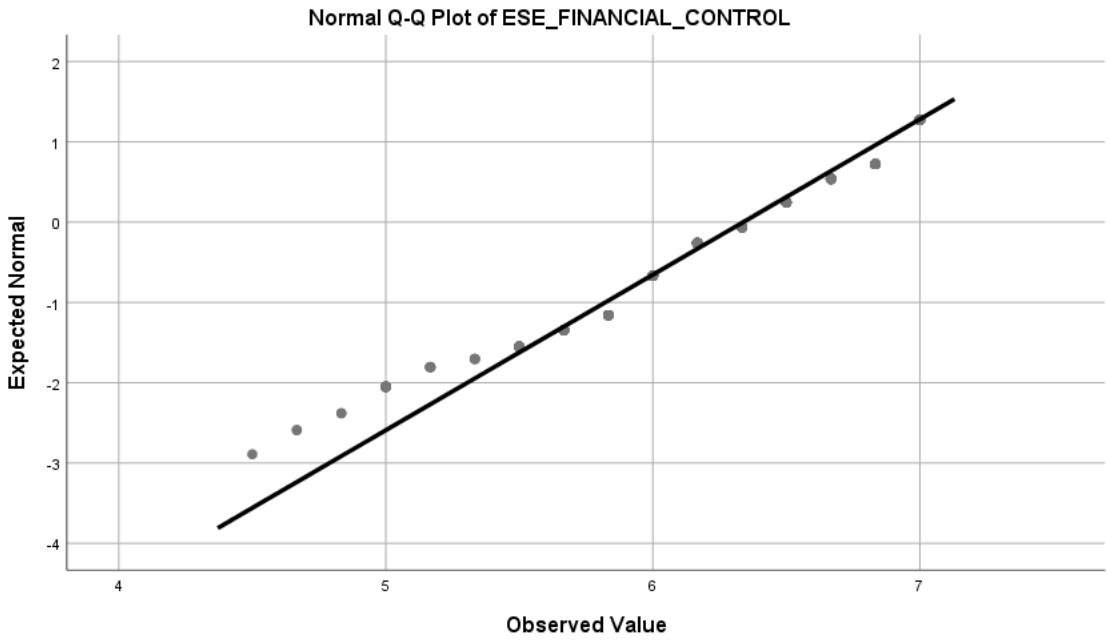
Normality


Normal Q-Q Plot of ENTREPRENEURIAL_TRAINING
Expected Normal
2
0
-2
-4
4
5
6
7
8
Observed Value


Normal Q-Q Plot of TRAINING_FINANCIAL_CONTROL
Expected Normal
2
0
-2
-4
4
5
6
7
8
Observed Value


Normal Q-Q Plot of ESE_MARKETING
Expected Normal
Observed Value
2
1
0
-1
-2
-3
-4
4
5
6
7
8


Normal Q-Q Plot of ESE_INNOVATION
Expected Normal
Observed Value
2
1
0
-1
-2
-3
-4
4.5
5.0
5.5
6.0
6.5
7.0
7.5


Normal Q-Q Plot of ESE_FINANCIAL_CONTROL
Expected Normal
Observed Value
2
1
0
-1
-2
-3
-4
4
5
6
7

APPENDIX C: Consistency Matrix

<table>
<tr><th colspan="8">To determine the impact of BDS training on the ESE of necessity- and opportunity-driven entrepreneurs</th></tr>
<tr><th>Sub-problem/Aims</th><th>Literature Review</th><th>Hypotheses</th><th>Research questions</th><th>Variables (Independent & Dependent)</th><th>Source of data</th><th>Type of data</th><th>Analysis</th></tr>
<tr><td>To determine whether Training has a more positive impact on the ESE of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs</td><td rowspan="2">Acs et al. (2008); Baptista and Karaöz (2006); Block and Wagner (2010); Botha et al. (2015); Chen et al. (1998); Mauer et al. (2017); McGee and Peterson (2019); McGee et al. (2009)</td><td>Hypothesis 1: Training has a more positive impact on the ESE of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.</td><td>Q1: To what extent does Training have a more positive impact on the ESE of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs?</td><td rowspan="2">BDS Training
- Marketing Training;
- Innovation Training
- Management Training
- Risk-Taking Training
- Financial Control Training
ESE of necessity-driven entrepreneurs (DV):
- ESE Marketing
- ESE Innovation
- ESE Management
- ESE Risk-taking
- ESE Financial Control
ESE opportunity-driven entrepreneurs (DV):
- ESE Marketing
- ESE Innovation
- ESE Management
- ESE Risk-Taking
- ESE Financial Control</td><td rowspan="2">Primary data:
Questionnaires:
- Q5.2 – Q5.6
- Q6.1 – Q6.5</td><td rowspan="2">Ordinal</td><td rowspan="2">Descriptive
Correlation
Multiple Regression</td></tr>
<tr><td>To determine whether Marketing Training has a more positive impact on the ESE Marketing of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs</td><td>H1a: Marketing Training has a more positive impact on the ESE Marketing of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.</td><td>Q1a: To what extent does Marketing Training have a more positive impact on the ESE Marketing of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs?</td></tr>
</table>

To determine the impact of BDS training on the ESE of necessity- and opportunity-driven entrepreneurs							
Sub-problem/Aims	**Literature Review**	**Hypotheses**	**Research questions**	**Variables (Independent & Dependent)**	**Source of data**	**Type of data**	**Analysis**
To determine whether Innovation Training has a more positive impact on the ESE Innovation of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs	Acs et al. (2008); Baptista and Karaöz (2006); Block and Wagner (2010); Botha et al. (2015); Chen et al. (1998); Mauer et al. (2017); McGee and Peterson (2019); McGee et al. (2009)	**H1b:** Innovation Training has a more positive impact on the ESE Innovation of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs	**Q1b:** To what extent does Innovation Training have a more positive impact on the ESE Innovation of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs?	BDS Training - Marketing Training; - Innovation Training - Management Training - Risk-Taking Training - Financial Control Training ESE of necessity-driven entrepreneurs (DV): - ESE Marketing - ESE Innovation - ESE Management - ESE Risk-taking - ESE Financial Control ESE opportunity-driven entrepreneurs (DV): - ESE Marketing - ESE Innovation - ESE Management - ESE Risk-Taking - ESE Financial Control	Primary data: Questionnaires: - Q5.2 – Q5.6 - Q6.1 – Q6.5	Ordinal	Descriptive Correlation Multiple Regression
To determine whether Management Training has a more positive impact on the ESE Management of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs		**H1c:** Management Training has a more positive impact on the ESE Management of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.	**Q1c:** To what extent does Management Training have a more positive impact on the ESE Management of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs?				

To determine the impact of BDS training on the ESE of necessity- and opportunity-driven entrepreneurs							
Sub-problem/Aims	**Literature Review**	**Hypotheses**	**Research questions**	**Variables (Independent & Dependent)**	**Source of data**	**Type of data**	**Analysis**
To determine whether Risk-Taking Training has a more positive impact on the ESE Risk-Taking of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs	Acs et al. (2008); Baptista and Karaöz (2006); Block and Wagner (2010); Botha et al. (2015); Chen et al. (1998); Mauer et al. (2017); McGee and Peterson (2019); McGee et al. (2009)	**H1d:** Risk-Taking Training has a more positive impact on the ESE Risk-Taking of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs.	**Q1d:** To what extent does Risk-Taking Training have a more positive impact on the ESE Risk-Taking of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs?	BDS Training - Marketing Training; - Innovation Training - Management Training - Risk-Taking Training - Financial Control Training ESE of necessity-driven entrepreneurs (DV): - ESE Marketing - ESE Innovation - ESE Management - ESE Risk-taking - ESE Financial Control ESE opportunity-driven entrepreneurs (DV): - ESE Marketing - ESE Innovation - ESE Management - ESE Risk-Taking - ESE Financial Control	Primary data: Questionnaires: - Q5.2 – Q5.6 - Q6.1 – Q6.5	Ordinal	Descriptive Correlation Multiple Regression
To determine whether Financial Control Training has a more positive impact on the ESE Financial Control of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs		**H1e:** Financial Control Training has a more positive impact on the ESE Financial Control of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs	**Q1e:** To what extent does Financial Control Training have a more positive impact on the ESE Financial Control of opportunity-driven entrepreneurs than it does on necessity-driven entrepreneurs?				

To compare the ESE levels of necessity- and opportunity-driven entrepreneurs							
Sub-problem/Aims	**Literature Review**	**Hypotheses**	**Research questions**	**Variables (Independent & Dependent)**	**Source of data**	**Type of data**	**Analysis**
To determine whether the ESE of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.	Acs et al. (2008); Baptista and Karaöz (2006); Block and Wagner (2010); Botha et al. (2015); Chen et al. (1998); Mauer et al. (2017); McGee and Peterson (2019); McGee et al. (2009)	**Hypothesis 2:** The ESE of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.	**Q2:** To what extent is the ESE of opportunity-driven entrepreneurs higher than that of necessity-driven entrepreneurs?	Dummy Variables Necessity- and opportunity-driven entrepreneurs Unemployment (Yes/No) ESE Marketing ESE Innovation ESE Management ESE Risk-Taking ESE Financial Control	Primary data: Questionnaires - Q3.5 - Q6.1 – Q6.5	Dichoto-mous Ordinal	Descriptive Correlation Linear Regression
To determine whether the ESE Marketing of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.		**H2a:** The ESE Marketing of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.	**Q2a:** To what extent is the ESE Marketing of opportunity-driven entrepreneurs higher than that of necessity-driven entrepreneurs?				
To determine whether the ESE Innovation of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.		**H2b:** The ESE Innovation of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs	**Q2b:** To what extent is the ESE Innovation of opportunity-driven entrepreneurs higher than that of necessity-driven entrepreneurs?				

To compare the ESE levels of necessity- and opportunity-driven entrepreneurs							
Sub-problem/Aims	**Literature Review**	**Hypotheses**	**Research questions**	**Variables (Independent & Dependent)**	**Source of data**	**Type of data**	**Analysis**
To determine whether the ESE Management of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs	Acs et al. (2008); Baptista and Karaöz (2006); Block and Wagner (2010); Botha et al. (2015); Chen et al. (1998); Mauer et al. (2017); McGee and Peterson (2019); McGee et al. (2009)	**H2c:** The ESE Management of opportunity-driven entrepreneurs is higher that of necessity-driven entrepreneurs	**Q2c:** To what extent is the ESE Management of opportunity-driven entrepreneurs higher than that of necessity-driven entrepreneurs?	Dummy Variables Necessity- and opportunity-driven entrepreneurs Unemployment (Yes/No) ESE Marketing ESE Innovation ESE Management ESE Risk-Taking ESE Financial Control	Primary data: Questionnaires - Q3.5 - Q6.1 – Q6.5	Dichoto-mous Ordinal	Descriptive Correlation Linear Regression
To determine whether the ESE Risk-Taking of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.		**H2d:** The ESE Risk-Taking of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.	**Q2d:** To what extent is the ESE Risk-Taking of opportunity-driven entrepreneurs higher than that of necessity-driven entrepreneurs?				
To determine whether the ESE Financial Control of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.		**H2e:** The ESE Financial Control of opportunity-driven entrepreneurs is higher than that of necessity-driven entrepreneurs.	**Q2e:** To what extent is the ESE Financial Control of opportunity-driven entrepreneurs higher than that of necessity-driven entrepreneurs?				

APPENDIX D: Ethics Clearance Certificate

Graduate School of Business Administration
University of the Witwatersrand, Johannesburg

Wits Business School Ethics Committee
Constituted under the University Human Research Ethics Committee (Non-Medical)

Ethics Clearance Certificate

Ethics protocol number: WBS/BA2173987/378
This certificate is only valid with a legitimate ethics protocol number and signed by the Researcher (below).

Project title	Business Development Services training effect on Entrepreneurial Self-Efficacy: comparing necessity and opportunity-driven entrepreneurs in South Africa
Investigator / Researcher	Miss Tshegofatso Eister
Nature of Project	MM (Entrepr & New Venture Creation)
Decision of the Committee	Approved unconditionally
Issue Date of Certificate	2019/11/20
Expiry date	Date of submission of the project report
Chairperson	Prof Anthony Stacey ☎ +27 11 717 3587 +27 82 880 4531 anthony.stacey@wits.ac.za

Declaration by Researcher

One copy must be signed by the Researcher and returned to the Chairperson of the Wits Business School Ethics Committee.

I fully understand the conditions under which I am authorized to carry out the abovementioned research and I guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I undertake to resubmit the protocol to the Committee.

Signature _____ Date: _____