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The Influence of Perceived Opportunities and Perceived Capabilities on Entrepreneurial Activity in Sub-Saharan Africa

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The Influence of Perceived Opportunities and Perceived Capabilities on Entrepreneurial Activity in Sub-Saharan Africa

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A Masters Research report submitted in partial fulfilment of the requirements for the degree of Master of Arts in the field of e-Science
in the
School of Social Sciences
University of the Witwatersrand, Johannesburg

Date: 15 March 2023

DECLARATION

I, Tshegofatso Kgomo, declare this report is my own, unaided work. It is being submitted for the Masters of Arts e-Science at the University of the Witwatersrand, Johannesburg. It has not been submitted for any degree or examination at any other university.



Tshegofatso Kgomo

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ABSTRACT

This research examines the impact of perceived opportunities and capabilities on entrepreneurial activities in Sub-Saharan Africa. It uses logistic regression to analyse available data on the region from the Global Entrepreneurship Monitor, which consists of survey data from South Africa. The analysis reveals that perceived opportunities do not significantly influence entrepreneurial activities within both the formal and informal sectors. However, perceived capabilities are pivotal in driving entrepreneurial activities. Further analysis incorporating control variables such as gender, age, educational levels, and employment status indicated that educational attainment does not have a relationship with entrepreneurial activity and age and employment status are negatively associated with entrepreneurial activity. Thus, this study challenges the prevailing notion that opportunity recognition predominantly fosters entrepreneurship in Sub-Saharan Africa, highlighting instead the critical role of perceived personal capabilities in entrepreneurial ventures.

Keywords: *Perceived opportunities, perceived capabilities, Sub-Saharan Africa and entrepreneurial activity*

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List of Acronyms and Abbreviations

SSA	-	Sub-Saharan Africa
EA	-	Entrepreneurial Activity
GEM	-	Global Entrepreneurship Monitor
APS	-	Adult Population Survey

Chapter One

1. Background

Total early-stage entrepreneurial activity (TEA) and nascent entrepreneurship rates in Sub-Saharan Africa (SSA) are one of the highest globally (Nyakudya *et al*., 2018). Entrepreneurship is considered a vital factor that promotes economic growth; it is also a formidable tool for solving complex socio-economic issues prevalent in SSA (Ozaralli & Rivenburg, 2016). It is increasingly recognised as a means of achieving financial independence and controlling one's destiny (Ratten & Jones, 2018). In evolving economies, entrepreneurs play multifaceted roles as agents of change and social development and introduce innovative ideas to the market; they also foster a business environment that promotes the formation of novel businesses (Brush *et al*., 2009; Santos *et al*., 2017; Ozdemir & Karadeniz, 2011; Peris-Ortiz *et al*., 2018 and Beynon *et al*., 2016).

However, the motivation to be involved in entrepreneurial activity (EA) is not universal and diverse factors motivate individuals to be involved in EA. Manic tendencies alone do not propel the decision to partake in EA, but a crucial aspect is recognising entrepreneurial opportunities which initiate such activities and the dedication to materialising the perceived opportunities (Wasdani & Mathew, 2014).

Usually, entrepreneurs are delineated by the motivations that influence them to engage in EA (Beyer & Morgan, 2018 and Sahasranamam & Sud, 2016), and the delineation focuses on the difference between necessity-driven entrepreneurs and opportunity-driven entrepreneurs (Williams & Nadin, 2012). Necessity-driven entrepreneurs partake in entrepreneurial activity to survive; circumstances such as poverty and unemployment propel them, and they typically operate in the informal sector (Edoho, 2015; Fitch & Myers, 2000; Ferreira *et al*., 2017 Landau & Gindey, 2008). Bewayo (1999) asserts that necessity-driven entrepreneurship is more prevalent in SSA, as individuals are forced to establish businesses because of poor economic conditions. However, disadvantaged circumstances do not always influence necessity-driven entrepreneurs to set up businesses; sometimes, they engage in entrepreneurial activities by choice (Williams, 2007).

Conversely, opportunity-driven entrepreneurs engage in entrepreneurial activities to capitalise on unexploited business opportunities (Baumol, 1990 & Shane & Venkataraman, 2000). Their quest pulls them towards entrepreneurship; they display

creativity and a high risk-taking propensity, especially when their environment fosters a culture of entrepreneurial action (Lundvall & Johnson, 2006). Entrepreneurship driven by necessity is perceived as vital to eradicating poverty and increasing EA (Sendra-Pons *et al*., 2022). Conversely, entrepreneurship propelled by opportunity promotes economic progression (Cervello-Royo *et al*., 2020). Therefore, according to Edoho (2015), there are more entrepreneurs who establish ventures out of necessity than those who do it because they recognise opportunities in their environment.

Sub-Saharan African economies are dualistic, consisting of a small formal sector that coincides with a significantly larger informal sector (Edoho, 2015). The informal sector in SSA is extensive and comprises small-scale, self-employed activities to create employment opportunities and income (Aberra *et al*., 2022 & McLaughlin, 1989). In SSA, 70% of jobs are provided by the informal sector (Loayza, 2018); these activities carried out in the informal sector are not monitored and are not taxed by governments (Tshuma & Jarri, 2013).

Individuals in SSA are attracted to entrepreneurial activities in the informal sector because it requires minimal capital to establish a business and offers low value-added competitiveness (Edoho, 2015; Tshuma & Jarri, 2013; Ratten & Jones, 2018). The informal sector is typically inhabited by entrepreneurs driven by necessity (Edoho, 2015). Conversely, the formal sector comprises businesses registered with government authorities (Liang *et al*., 2022) and provides government funding opportunities (Adu-Gyamfi *et al*., 2022; Liang *et al*., 2022). However, the formal sector is incapable of providing adequate job opportunities (Chiloane-Tsoka & Botha, 2015).

There is a rebirth of entrepreneurial activities throughout the African continent (Dvoulety & Orel, 2019), and more African countries have been shifting away from traditional sources of income to entrepreneurship (Chigunta, 2017 and Dvoulety *et al*., 2018). However, minimal research focuses on the determinants of EA (Dvoulety & Orel, 2019). Recent research suggests a shift in SSA towards opportunity-driven entrepreneurship (Herrington & Kew, 2013). This shift is driven by African countries' increasing positive marketplace potential and the cultural support that stems from most individuals being involved in some EA (Acs *et al*., 2013). Furthermore, the rapid urbanisation of African countries also plays a role in how individuals perceive entrepreneurial opportunities (Acs *et al*., 2013). Therefore, engaging in EA is typically a deliberate and purposeful act. Several factors influence this decision, and the

primary influencing factor is an individual's entrepreneurial abilities (Anwar ul Haq *et al*., 2014). Thus, the only way for entrepreneurship to exist is if potential entrepreneurs can recognise opportunities, are certain that they have the skills required to establish a business and are prepared to act on their intentions (Tengeh *et al*., 2015; Herrington & Kew, 2013). This research examines whether perceived opportunities and capabilities significantly influence EA in SSA among individuals in the formal and informal sectors. The data set used is from the 2019 GEM APS for South Africa, the only sub-Saharan country that participated in the survey. Furthermore, gender, age, educational attainment, and employment status are included as control variables to determine whether the inclusion of these variables significantly affects the association between perceived opportunities, perceived capabilities and EA.

1.1. Research Question

The research question of the research is:

Does perceived opportunities and perceived capabilities influence entrepreneurial activities in Sub-Saharan Africa?

1.2. Research Hypothesis

Based on existing literature, perceived opportunities and capabilities are anticipated to be positively associated with EA. Therefore, while controlling for other factors, the research hypothesises that perceived opportunities and perceived capabilities positively influence EA. The basis to reject the null hypothesis is if there is a positive and significant association between perceived opportunities, perceived capabilities, and EA.

The following research hypothesis is formulated. The null hypothesis is represented as H_0, and the alternative hypothesis as H_a.

H_0: Controlling for other potential causal factors, perceived opportunities, and perceived capabilities do not positively influence EA among individuals in the formal and informal sectors.

H_a: Controlling for other potential causal factors, perceived opportunities, and perceived capabilities positively influence EA among individuals in the formal and informal sectors.

1.3. Purpose of the Research

In SSA, economic conditions are often unfavourable, and entrepreneurs usually operate in the informal sector. However, some researchers suggest that EA in SSA is also influenced by recognising opportunities and an individual's assessment of their abilities. Therefore, this research aims to understand whether perceived opportunities and capabilities significantly influence EA among individuals operating in both sectors of SSA. The overall objective of this research is to evaluate the influence of perceived opportunities and perceived capabilities on EA in SSA.

1.4. Significance of the Research

This research is significant because it provides insight that enriches our understanding of entrepreneurship and the factors influencing EA in SSA. Furthermore, understanding the factors influencing EA in SSA is crucial to forecasting business performance, growth, success, and longevity (Smith & Tolbert, 2018).

1.5. Definition of Terms Used

This research uses the following terms:

Entrepreneurship - “Any attempt at new business or new venture creation, such as self-employment, a new business organisation, or the expansion of an existing business, by an individual, a team of individuals, or an established business” (Reynolds *et al*., 1999). According to Ahmad and Seymour (2008, p. 14), entrepreneurship: “is the phenomenon associated with entrepreneurial activity”.

Entrepreneurial activity - “The enterprising human action in pursuit of the generation of value, through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets” (Ahmad & Seymour, 2008, p. 14).

Entrepreneurs - “The phenomena associated with entrepreneurial activity” (Ahmad & Seymour, 2008, p. 14).

1.6. Limitations of the Research

The first limitation of this research is that it is restricted by the availability of recent data by GEM. This research relies on GEM’s APS data and endeavours to use recent data from GEM to accept or disprove the research hypothesis and answer the research question. However, the most recent dataset available on the GEM website as of the date of the research is 2019. Therefore, this research uses the 2019 dataset. The second limitation of the research is that the GEM APS data conflates entrepreneurs

operating in the informal sector with those operating in the formal sector. The two do not come as separate variables. Consequently, it is difficult to analyse the data and accurately draw conclusions about their differences. The third limitation of the study is that only one country was selected for the analysis. Therefore, the results are not representative of EA in the entire region.

1.7. Ethical Considerations

In adhering to the ethical standards of the School of Social Sciences, University of Witwatersrand, this research relies on the use of secondary data accessed from the GEM website, which is an open source. Therefore, an ethical waiver was obtained because there were no human participants in this research. The ethical waiver number is WINTR2022/11/03.

1.8. Dissertation Structure

The research comprises five chapters. Chapter one thoroughly discusses the background information, the research's purpose, the research, the research objective, the research question, the significance of the research, definitions of terms used, and the research's limitations. Chapter two thoroughly discusses the theoretical framework and literature reviewed for the research. Chapter three thoroughly discusses the research methodology employed to investigate the influence of perceived opportunities and perceived capabilities on EA in SSA. Chapter four thoroughly discusses the results obtained from various statistical techniques used to investigate the influence of perceived opportunities and perceived capabilities on EA in SSA. This chapter also presents a discussion of the results obtained. Chapter five summarises the results and the conclusion.

Chapter Two: Literature Review

2. Introduction

The following chapter thoroughly discusses the existing literature regarding the theoretical framework of the research, perceived opportunities, perceived capabilities and EA.

2.1. Theoretical Framework

This research is underpinned by the social cognitive theory proposed by Albert Bandura. As promulgated by Albert Bandura, the social cognitive theory suggests that personal, behavioural, and environmental factors all shape human behaviour (Bayron, 2013; Boudreaux *et al*., 2019). These factors interact in a three-way relationship. Personal influences, such as cognition, beliefs, perceptions, and emotions, are vital in initiating and sustaining motivational outcomes (Schunk & Di Benedetto, 2020). Environmental influences that shape motivational processes and outcomes include socially modelled influences (Schunk, 2012). Lastly, behavioural influences, including choice of activities, persistence, achievement, and environmental regulation, also impact motivational outcomes (Schunk & Di Benedetto, 2020). These insights directly affect entrepreneurship, where understanding and managing these factors can significantly impact an entrepreneur's success.

According to Bandura (1986), social cognitive theory emphasises individual traits, particularly self-efficacy, result expectations, and personal goals. As defined by McGee et al. 2009, self-efficacy is the sense of self-confidence an entrepreneur has in their knowledge and skills to create and operate a novel business. This belief is a critical factor in entrepreneurship, as successful entrepreneurs often have the necessary knowledge and skills and a resilient self-belief in their capabilities. This self-confidence empowers individuals to follow their goals and take charge of their surroundings (Rauch & Frese, 2007; Mc Gee *et al*., 2009; Godwin *et al*., 2016).

Individuals' belief in their competencies to achieve specific tasks or goals, also called perceived self-efficacy, plays a vital role in an entrepreneurial mindset (Rauch & Frese, 2007). Wood and Bandura (1989) argue that motivation is also influenced by perceived self-efficacy, consequently determining the amount of effort individuals put into accomplishing their goals. In this research, self-efficacy is operationalised as perceived capabilities.

Furthermore, social cognitive theory postulates that individuals tend to be future-oriented; they set goals in the present to stimulate the behaviour necessary to achieve the goals in the future (Bandura, 1989). A lack of clear vision about things an individual wishes to accomplish decreases motivation and leads to misguided efforts (Wood & Bandura, 1989). Opportunity recognition can significantly assist in making the formation of clear goals easier, giving an individual direction and purpose, and stimulating the efforts needed to accomplish their goals (Baron & Shane, 2007).

Entrepreneurial alertness, understood as the perception of entrepreneurial opportunities, is the primary focus in most modern theorising about entrepreneurship (Foss & Klein, 2012). Entrepreneurially alert individuals are more inclined to perceive entrepreneurial opportunities (Boudreaux *et al*., 2019). Consequently, this becomes a foundation for setting goals that lead to the formation of new entrepreneurial ventures (Baron, 2006). Social cognitive theory transforms symbolic concepts into suitable actions (Wood & Bandura, 1989). In this research, entrepreneurial alertness is operationalised as perceived opportunities.

In the context of this research, personal factors such as entrepreneurial alertness or the perception of an individual's entrepreneurial capabilities influence individuals to perceive entrepreneurial opportunities in their environment or perceive the educational opportunities and access to a supportive network available in their environment, which lead to them to engage in EA.

2.2. Criticism of the social cognitive theory

Social cognitive theory and its principles are criticised for not being context-specific (Schunk & Di Benedetto, 2020). The criticism stems from the theory developed when societies were less diverse than today (Schunk & Di Benedetto, 2020). According to McInerney (2008), adopting theories of motivation developed in Western societies to explain human behaviour in different cultural contexts leads to a mismatch. The theories reflect the context, core culture, and values of the society in which they were initially developed (McInerney, 2008). Therefore, Schunk and Di Benedetto (2020) argue that modifications are needed when applying social cognitive theory across different settings and populations.

2.3. Perceived Opportunities and Entrepreneurial Activity

Perceived opportunities positively influence EA in SSA. Recognising entrepreneurial opportunities is at the heart of entrepreneurship and entrepreneurial ability (Karabulut, 2016; Vodă *et al*., 2020). Shane *et al*. 2003, concurs and argues that a crucial aspect of establishing and operating a business is the competency of an entrepreneur to perceive entrepreneurial opportunities. The proficiency of entrepreneurs to discover opportunities sparks entrepreneurial action to respond to gaps identified in the market and influences the creation of new ventures (Karabulut, 2016; Van Vuuren & Alemayehu, 2018). Individuals with the competency to perceive good opportunities are inclined to explore entrepreneurial opportunities using their physical and mental skills; they also have a greater inclination to establish a business (Fuentelsaz *et al*., 2015). The cognitive processing of market-related ideas and environmental scanning of the area are essential for the perception of opportunities; these enable people to discover opportunities which many people may perceive as obstacles and tend to avoid (Ndofirepi & Rambe, 2016). In addition, they are more confident in entrepreneurial ventures because of their ability to identify and use resources to complement them. Consequently, this creates a favourable view of entrepreneurship (De Clercq *et al*., 2013). Individuals with the competence to recognise and exploit entrepreneurial opportunities are more inclined to become entrepreneurs (Baron & Ensley, 2006; Casson & Wadeson, 2007; Clarysse *et al*., 2011). According to Anwar ul Haq *et al*. (2014), an entrepreneurial opportunity is a chance to respond to and fill a gap prevalent in the marketplace by bringing together available resources to dispense the products or services in demand. Opportunity recognition comprises three phases: identifying a gap in the market or unused resources, identifying a match between the market gap and resources, and creating a new fit by establishing a business venture (Ardchvili *et al*., 2003). Those more likely to perceive opportunities are entrepreneurially alert individuals (Anwar ul Haq *et al*., 2014). Alertness is a state of focusing one's attention on available information regarding commercially feasible arenas. Entrepreneurially alert people are more attuned to identifying resources such as land, technology or inventions that have not been exploited as yet (Ardichivil *et al*., 2003). Shane and Venkataraman (2000) argue that the nature of the opportunity and individual differences influence an individual's decision to perceive and exploit entrepreneurial opportunities. Empirical evidence indicates that perceived opportunity influences EA

in SSA (Dvoulety & Orel, 2019; Maziriri *et al*., 2019; Van Vuuren & Alemayehu, 2018; Munyoro *et al*., 2016 and Bello, 2019).

2.4. Perceived Capabilities and Entrepreneurial Activity

Perceived capabilities positively influence EA in SSA. Personal capabilities strongly influence an individual's entrepreneurial potential (Anwar ul Haq *et al*., 2014). Perceived capabilities are defined as the: "percentage of the 18 to 64 population (individuals involved in any stage of EA excluded) who believe they have the required skills and knowledge to start a business" (Hill *et al*., 2022, p. 194). Individuals confident that they are adequately knowledgeable, skilled, and experienced to establish a business are six times more inclined to engage in EA (Herrington & Kew, 2013). The choice of entrepreneurial activities an individual engages in and their judgement of their competence influences their behaviour in specific environments to fulfil tasks (Woods & Bandura, 1989). Individuals' perception of their abilities influences their motivation to engage in entrepreneurial activities, influencing the effort they put into the venture (Huang *et al*., 2023). Moreover, a strong perception of one's capabilities increases entrepreneurial confidence (Huang *et al*., 2023). Perceived entrepreneurial capabilities play a crucial role in modern economies. Krueger Jr. (2003) argues that EA results from entrepreneurial opportunities formed in an economy and is a product of the entrepreneurial capabilities of an individual.

However, even though a desirable pre-requisite for EA is that a potential entrepreneur should possess entrepreneurial capabilities, possessing entrepreneurial capabilities does not imply that a new venture will be automatically established (Ndofirepi & Rambe, 2016). Potential entrepreneurs need to have the cognitive navigation skills to investigate any opportunities present in the market and make the most of them (Ndofirepi & Rambe, 2016). Hechavarria *et al*. (2012) argue that as much as potential business owners need to perceive available opportunities in the market to establish a new venture, they should also possess the capabilities necessary to incubate a business. Perceived entrepreneurial capabilities are crucial in creating and surviving new business ventures (Ndofirepi & Rambe, 2016). According to Nodfirepi and Rambe (2016), entrepreneurial capabilities play a vital role in individuals' being alert to opportunities and their competence to operate a new venture, innovate and adapt to change. Hence, perceived entrepreneurial capabilities are fused with self-efficacy. Self-efficacy is an assessment of an individual's capacity to gather resources, course

of action, and motivation, as well as exert control over life events (Anwar ul Haq *et al*., 2014). In an entrepreneurial context, self-efficacy refers to the confidence an individual has in their ability to succeed in entrepreneurial positions and duties (Chen *et al*., 1998).

3. Conclusion

Existing literature indicates that perceived opportunities and perceived capabilities influence EA in SSA. Furthermore, according to social cognitive theory, individuals who are entrepreneurially alert to entrepreneurial opportunities and believe that they have adequate skills to create a business are more likely to engage in entrepreneurial activity.

Chapter Three: Research Methodology

4. Introduction

This chapter provides a thorough discussion of the research methodology used in the research to investigate the influence of perceived opportunities and perceived capabilities on EA in SSA. This chapter discusses the research design, data collection techniques and data analysis strategies.

4.1. Research Design

This research uses a descriptive research design. Descriptive research describes the population or phenomenon being studied by describing its characteristics (Manjunatha, 2019). This type of research focuses mainly on answering the questions of what, where, when, and how rather than why (Manjunatha, 2019). By collecting and analysing data through various methods, researchers can better understand the subject they are studying (Manjunatha, 2019; Riyaz *et al*., 2022). Descriptive research is a method that involves collecting quantifiable data for statistical analysis of a population sample. Unlike other research methods, none of the variables in descriptive research are influenced or controlled. Instead, they are identified, monitored, and evaluated. Additionally, descriptive research is a cross-sectional study that studies various aspects of the same population sample (Manjunatha, 2019; Riyaz *et al*., 2022). Descriptive research design aligns with the purpose of exploring the influence of perceived opportunities and perceived capabilities on EA within the SSA context.

4.2. Data Preparation

The data that this research uses is retrieved from GEM. The data was prepared for analysis using “R” statistical software version 4.3.3 within the “R” Studio development environment. To prepare the data for analysis, the 2019 APS global individual-level data was loaded; after that, the data was scanned to determine numbers representing each country in SSA and selected accordingly by sub-setting them from the overall dataset. Only one country, namely South Africa, came up. Thereafter, the perceived opportunities, perceived capabilities, TEA, gender, age, educational attainment, and employment status variables were included in the data that will be used for this research.

4.3. Data and Data Source

This research uses secondary data to examine the influence of perceived opportunities and perceived capabilities on EA in SSA. According to Sheriff (2018), secondary data enables researchers to explore and analyse new hypotheses and answer research questions. This research uses the 2019 GEM dataset, specifically the global individual-level APS conducted by GEM. GEM provides a complete, inclusive set of indicators on entrepreneurship; this allows for the creation of elaborate profiles of entrepreneurship in each country studied (Bosman & Kelley, 2018). The APS is a comprehensive survey that conglomerate characteristics, motivation and ambition of individuals establishing a business and social attitude towards entrepreneurship (Hill *et al*., 2022). The rigorous methodology that the GEM teams follow, coupled with thorough supervision and processing by the data team, enables the cross-national comparison of the data (Bosman & Kelley, 2018). The focus is on the most recent data, which, as of the date of the research, is 2019.

4.3.1. Dependent Variable

This research measures EA by using the GEM’s total early-stage entrepreneurial activity. TEA is defined as the: “percentage of the 18 to 64 population who are either a nascent entrepreneur or owner-manager of a new business” (Hill *et al*., 2022, p. 194).

4.3.2. Independent Variables

The two independent variables used to measure association in this research are perceived opportunities and perceived capabilities. Perceived opportunities refer to the: “percentage of the 18 to 64 population (individuals involved in any stage of entrepreneurial activity excluded) who see good opportunities to start a firm in the area where they live” (Hill *et al*., 2022, p. 194). To measure perceived opportunities respondents were asked whether they perceive good opportunities to start a firm in their area in the next six months. The variable is measured using a binary scale; respondents have to select a yes, coded as 1 or a no, coded as 0.

Perceived Capabilities refer to the: “percentage of 18 to 64 population (individuals involved in any stage of entrepreneurial activity excluded) who believe they have the required skills and knowledge to start a business” (Hill *et al*., 2022, p.194). To measure perceived capabilities respondents were asked whether they believe they have the required skills and knowledge to start a business. This variable is also measured using a binary scale; respondents have to select a yes, coded as 1 or a no, coded as 0.

4.3.3. Control Variables

The four demographic variables introduced as control variables in this research are gender, age, educational attainment, and employment status. These control variables are introduced to assess whether perceived opportunities and capabilities influence EA or if other influential factors exist.

The first control variable is gender. This is because Santos *et al*. (2017) found that gender significantly influences early-stage EA, and men engage in EA at a higher rate than women. Men who earn more, have higher education levels, and have self-confidence are more likely to recognise entrepreneurial opportunities and are inclined to become entrepreneurs (Vodă *et al*., 2020; Li., 2021). Women entrepreneurs with families often have to complete domestic duties, and this can distract them from time-consuming EA (Muzata, 2024). However, according to the World Bank Group (2019), most entrepreneurs are women in SSA. To measure gender, respondents are asked to select their gender by selecting either 1, which represents male; 2, which means female; -1, which represents don’t know; or -2, which represents refused.

The second control variable is age. This is because age influences the motivation to engage in EA. According to Bosma and Kelley (2018), older adults have more work experience, education, and access to resources and networks and are more capable of perceiving opportunities than young people. To measure age, respondents are asked to select the age group applicable to them by either selecting 1 (0 - 17), 2 (18 - 24), 3 (25 - 34), 4 (35 - 44), 5 (45 - 54), 6 (55 - 64), or 7 (65 - 120).

The third control variable is educational attainment. This is because educational attainment positively influences entrepreneurial start-ups; individuals with post-secondary education are more likely to establish an entrepreneurial venture when they possess educational qualifications (Li, 2021). According to research, individuals with a higher level of education have a greater inclination to pursue opportunity-driven entrepreneurship instead of pursuing self-employment out of necessity (Reynold *et al*., 2003). A finding by Levie and Autio (2008) revealed that higher education, specifically post-secondary entrepreneurship-related education, is positively correlated with the ability to recognise market opportunities. According to research findings by Poschke (2013), individuals who have completed 12 or more years of schooling are less likely to become necessity entrepreneurs in all surveyed countries. To measure educational attainment, respondents are asked to select either 1720 (graduate exposure), 1316 (post-secondary schooling), 1212 (secondary degree), 111 (secondary education exposure) or 0 (no education).

The fourth control variable is employment status. To measure employment status, respondents are asked to select either 10 (working full-time or part-time), 20 (not working), or 30 (retired students).

4.4. Summary of variables and data source

Table 1: Summary of Variables and Data Source

Variable Name	Variable Type	GEM labels	Data Source
TEA	Independent Variable	TEAyy	(GEM, 2019)
Perceived Opportunities	Dependent Variable	OPPORTyy	(GEM, 2019)
Perceived Capabilities	Dependent Variable	SUSKILyy	(GEM, 2019)
Gender	Control Variable	gender	(GEM, 2019)
Age	Control Variable	Age9c	(GEM, 2019)
Educational Attainment	Control Variable	GEMEDUC	(GEM, 2019)
Employment Status	Control Variable	GEMWORK3	(GEM, 2019)

4.5. Method of Analysis

This research uses logistic regression to analyse the data retrieved from GEM; furthermore, the data analysis and hypothesis testing are performed in “R” statistical software version 4.3.3 within the “R” Studio development environment. Logistic regression is a statistical model widely used to investigate the association between one (1) or more independent variables and a categorical dependent variable (Edition, 2019). The probability of an event occurring is estimated versus the probability of non-occurrence, with the effect of an independent variable explained in terms of odds (Park, 2013). Additionally, logistic regression fits data to a logistic curve to examine the probability of an event occurring (Park, 2013).

Logistic regression is a popular model researchers use to investigate the impact of predictor variables on categorical outcomes (Edition, 2019). Logistic regression models are classified into two (2) types: binary logistic regression and multinomial logistic regression. The binary logistic regression model will be employed in this research as it is best suited for situations where the dependent variable is dichotomous, and the independent variables are either continuous or categorical (Park, 2013). It is important to note that the dependent variable should be qualitative

and only take discrete values by nature (Ambrosius, 2007). Additionally, logistic regression can handle continuous and discrete data as independent variables (Park, 2013). Logistic regression is also classified as a generalised linear model; according to Edition (2019), it is a two-stage modelling approach. Firstly, the response variable is modelled using a probability distribution, either binomial or Poisson distribution. Secondly, the distribution parameter is modelled using a combination of predictors and a particular form of multiple regression. According to Park (2013), the following assumptions apply to logistic regression: firstly, the dependent variable should be discrete and primarily dichotomous. Secondly, since logistic regression examines the probability of the occurrence of an event, the desired outcome should be coded as one. Thirdly, it is imperative to fit the model correctly and avoid overfitting with meaningless variables included and underfitting with meaningful variables excluded. Lastly, each observation should be independent.

5. Conclusion

This chapter provided an overview of the research methodology employed in the research. The research will retrieve the data from the GEM website. Based on the data set, TEA is the dependent variable, and perceived opportunities and perceived capabilities are the independent variables. Furthermore, gender, age, educational attainment, and employment status are used as control variables. The research uses “R” to prepare and analyse the data.

Chapter Four: Results and Discussion

6. Introduction

The results of the research are presented in this chapter. This chapter includes the frequency distributions and proportions of all the variables, the summary statistics of the variables, a correlation matrix, and logistic regression models.

6.1. Frequencies and Proportions

The South African data set has 2991 observations before removing missing or empty values represented by NA. These missing or empty values might be a result of participants not providing information or answering the question[1]. After removing the NAs, the final data set has 2074 observations. Frequency counts and proportions are essential to describe the distribution of responses of each variable in the data set (De Vos *et al*., 2011; Neuman, 2014). The frequency distribution and proportions of the dependent and independent variables are shown in Table 2. As shown, 237 or 11% of individuals indicated they were involved in EA. In contrast, 1837 or 89% indicated they were not engaged in EA. Therefore, more individuals indicated that they did not partake in EA than individuals who indicated that they were involved in EA.

Furthermore, regarding perceived opportunities, 1198, or 58% of the individuals, agreed that they perceived good entrepreneurial opportunities to establish a business in the next six months. Conversely, 876 or 42% of individuals, disagreed that they perceived good entrepreneurial opportunities. Therefore, as indicated, more individuals agreed that they perceived good entrepreneurial opportunities than those who disagreed.

Lastly, 1280 or 62% of individuals agreed they have the knowledge, skills and experience to create new entrepreneurial ventures. Conversely, 794 or 38% of individuals disagreed that they have the mandatory knowledge, skills and experience to form a new entrepreneurial venture. This implies that more individuals believe they possess the confidence, knowledge, and skills to create a new business.

[1] The “R” packages that were used in this research include APA Tables (Stanley, 2020); haven (Wickham, 2024); stargazer (Hlavac, 2022); and psych (Revelle, 2017).

Table 2: Frequencies and Proportions of Dependent and Independent Variables

	N	Proportions
TEA		
0 (No)	1 837	0.89
1 (Yes)	237	0.11
Perceived Opportunities		
0 (No)	876	0.42
1 (Yes)	1 198	0.58
Perceived Capabilities		
0 (No)	794	0.38
1 (Yes)	1 280	0.62

The frequency distribution and proportions of the control variables are shown in Table 3. As indicated in Table 3, there are more females, 1045 or 50%, than males, 1029 or 49%. In terms of age group, the majority of the individuals 548 or 26% are classified under the 25 and 34 age group, followed by 481 or 23% of individuals in the 18 and 24 age group, followed by 425 or 20% of individuals in the 35 and 44 age group, then 291 or 14% of individuals in the 45 and 54 age group, then 198 or 10% of individuals in the 55 and 64 age group and lastly, individuals in the 65 and 120 age group. Contrary to the argument by Bosma and Kelley (2018) about old adults being more inclined to engage in entrepreneurial activity, most individuals are young, aged 25 and 34.

Moreover, in terms of educational attainment, the majority of individuals 847 or 41% indicated that they completed secondary school, 605 or 29% of individuals indicated that they had post-secondary school exposure such as attending a college or university or vocational training, 418 or 20% indicated that they had some secondary school exposure, 192 or 9% of individuals indicated that they had graduate exposure; lastly, 12 or 1% indicated that they did not have any school exposure.

Lastly, regarding their employment status, 875 or 42% of individuals, indicated that they were working either full-time or part-time, followed by 837 or 40%, who indicated that they were not working, and 362, or 17%, indicated that they were retired students.

Table 3: Frequencies and Proportions of Control Variables

	N	Proportions
Gender		
1 (Male)	1 029	0.49
2 (Female)	1 045	0.50
Age		
2 (18-24)	481	0.23
3 (25-34)	548	0.26
4 (35-44)	425	0.20
5 (45-54)	291	0.14
6 (55-64)	198	0.10
7 (65-120)	131	0.06
Educational Attainment		
0 (None)	12	0.01
111 (Secondary)	418	0.20
1 212 (Secondary degree)	847	0.41
1 316(Post-secondary)	605	0.29
1 720 (Grad exposure)	192	0.09
Employment Status		
10 (Working full-time/part-time)	875	0.42
20 (Not working)	837	0.40
30 (Retired student)	362	0.17

Considering the frequencies and proportions of the dependent, independent, and control variables, the respondents are not involved in EA and perceive good entrepreneurial opportunities and capabilities. Furthermore, they are females between 25 and 34 years old; they completed secondary school or have school exposure and work full-time or part-time.

6.2. Summary Statistics

Summary statistics are shown in Table 4. The summary statistics do not imply a correlation between the variables; instead, they provide an overview of the distribution and the pattern of the data. The sample size is 2 074 observations for the year 2019.

As shown in Table 4, the dependent and independent variables are measured on a binary zero to one (0-1) scale. Furthermore, regarding control variables and how they were measured, respondents were given options on each of the four variables to select the item that applies to them most.

Table 4: Summary Statistics of the Variables

	N	MEAN	SD	MIN	MAX	RANGE	SE
TEA	2 074	0.11	0.32	0	1	1	0.01
Perceived Opportunity	2 074	0.58	0.49	0	1	1	0.01
Perceived Capabilities	2 074	0.62	0.49	0	1	1	0.01
Gender	2 074	1.50	0.50	1	2	1	0.01
Age	2 074	3.79	1.50	2	7	5	0.03
Educational Attainment	2 074	1 060.45	506.96	0	1 720	1 720	11.13
Employment Status	2 074	17.53	7.32	10	30	20	0.16

Based on the Table, an average of 11% of individuals were engaged in EA. Furthermore, 58% of individuals perceived good entrepreneurial opportunities; conversely, 62% perceived they possess the knowledge, skills and experience required to start a business.

6.3. Correlation

Correlation is a method that provides a single numerical value which contains information about the strength and direction of a relationship between two or more variables (Krueger & Neuman, 2006). To obtain this single numerical value, three aspects of the relationship are examined: the presence of a relationship (whether a correlation between variables is present or absent), the strength (whether the correlation is strong or weak), and the direction of the relationship (whether the correlation is positive or negative) (De Vos *et al*., 2011). This single numerical value, known as a correlation coefficient, is measured along a continuum ranging from +1.0 on one end to -1.0 on the other. A correlation coefficient closer to +1.0 indicates a positive relationship and a -1.0 correlation coefficient indicates a negative one (De Vos

et al., 2011; Neuman, 2014). A correlation coefficient closer to either +1.0 or -1.0 indicates a near-perfect correlation, whilst a coefficient closer to the continuum indicates a weak correlation (De Vos *et al*., 2011).

The correlation matrix is shown in Table 5. As shown in Table 5, perceived opportunities positively correlate with EA; the correlation coefficient is .09, and the correlation is statistically significant. Perceived capabilities positively correlate with EA; the correlation coefficient is .21, and the correlation is statistically significant.
Gender and age are negatively correlated with EA; the correlation coefficient of gender is -.02, and of age is -.04; gender and age are statistically insignificant. Education positively correlates with EA; the correlation coefficient is .06, and the correlation is statistically significant. Furthermore, employment status negatively correlates with EA; the correlation coefficient is -.20, and the correlation is statistically significant.
The correlation matrix results suggest an increased perception of entrepreneurial opportunities, capabilities, and educational exposure is associated with EA. Furthermore, gender, age, and employment status are negatively associated with EA. This implies that gender biases, unequal access to resources, lack of willingness or lower energy levels, and lack of time or motivation might dissuade individuals from engaging in entrepreneurial activity.

Table 5: Correlation Matrix

Means, standard deviations, and correlations with confidence intervals

Variable	*M*	*SD*	1	2	3	4	5	6
1. TEA	0.11	0.32						
2. Opportunities	0.58	0.49	.09** [.05, .13]					
3. Capabilities	0.62	0.49	.21** [.17, .25]	.34** [.30, .37]				
4. Gender	1.50	0.50	-.02 [-.07, .02]	-.05* [-.09, -.01]	-.09** [-.13, -.04]			
5. Age	3.79	1.50	-.04 [-.08, .00]	-.13** [-.18, -.09]	-.07** [-.12, -.03]	.06** [.02, .11]		
6. Education	1 060.45	506.96	.06** [.02, .10]	.06** [.01, .10]	.13** [.09, .17]	-.03 [-.08, .01]	-.16** [-.20, -.12]	

7. Employment	17.53	7.32	-.20** [-.24, -.15]	-.09** [-.14, -.05]	-.19** [-.23, -.15]	.05* [.01, .09]	.07** [.02, .11]	-.17** [-.21, -.13]

Note. M and *SD* are used to represent mean and standard deviation, respectively. Values in square brackets indicate the ninety-five (95%) confidence interval for each correlation. The confidence interval is a plausible range of population correlations that could have caused the sample correlation (Cumming, 2014). * indicates $p < .05$. ** indicates $p < .01$

6.4. Logistic Regression

Significance tests are an essential final step in statistical analysis to make inferences from the results (De Vos *et al*., 2011). Tests of statistical significance are often performed on a zero point zero, five (0.05) or zero point zero, one (0.01) level of significance (De Vos *et al*., 2011 and Neuman, 2014). A zero point zero, five (0.05) significance level denotes a 95% chance that the outcomes are due to the influence of the independent variable and not a chance (De Vos *et al*., 2011). A zero point zero, one (0.01) significance level denotes a 99% chance that the outcomes are not due to chance (De Vos *et al*., 2011). A 95% confidence level in Social Science is considered the lowest acceptable result; anything below is assumed to result from chance due to sampling error (De Vos *et al*., 2011).

Logistic regression of the dependent and two independent variables is shown in **Error! Not a valid bookmark self-reference.**. As shown in **Error! Not a valid bookmark self-reference.**, the dependent variable has a negative coefficient of -3.619, which is statistically significant. Perceived opportunities have a positive coefficient of 0.160 and are statistically insignificant. Furthermore, perceived capabilities have a positive coefficient of 1.904 and are statistically significant. The outcomes suggest that those who perceive opportunities within their environment are more likely to engage in EA; however, it is not a major driving factor. Furthermore, those confident in their capabilities, knowledge, and skills are more likely to engage in EA than those who are not.

Table 6: Logistic Regression of Dependent and Independent Variables

	Dependent variable:
	TEA
Perceived Opportunities	0.160
	(0.157)
Perceived Capabilities	1.904***
	(0.235)
Constant	-3.619***
	(0.225)
Observations	2,074
Log Likelihood	-679.454
Akaike Inf. Crit.	1,364.908
Note:	***p<0.1; **p<0.05; ***p<0.01***

Table 7 below presents the odds ratios for the logistic regression above. The odds ratios indicate that with every unit increase in perceived opportunity, the likelihood of someone engaging in entrepreneurial activity escalates by 17%. This statistic underscores the significant role that recognising opportunity plays in motivating individuals to embark on entrepreneurial ventures. However, while this increase is noteworthy, it is crucial to understand that, although influential, opportunity recognition does not stand alone as the paramount driver of entrepreneurship. This implies that while detecting new market possibilities or untapped niches can inspire entrepreneurs to act, other critical factors contribute to the decision to start a new business. Furthermore, the odd ratios indicate that with every unit increase in perceived capabilities, the likelihood of someone engaging in entrepreneurial activity increases by 71%. Therefore, the more confident individuals are about their capabilities, skills, and knowledge necessary for entrepreneurship, the more likely they are to start a business.

Table 7: Odds Ratios

	OR	Estimate	Std. Error	z value	Pr(> | z|)
TEA	0.027	- 3.619	0.225	-16.064	0
Perceived Opportunities	1.174	- 0.160	0.157	1.017	0.309
Perceived Capabilities	6.714	- 1.904	0.235	8.118	0

The logistic regression model of the dependent, independent, and control variables is shown in Table 8. As shown in 8, perceived opportunities have a positive coefficient of 0.111 but are not statistically significant. Introducing control variables in Table 7 reduced the coefficient of perceived opportunities from 0.160 to 0.111; however, it remained statistically insignificant. Therefore, the null hypothesis is accepted. Perceived capabilities have a positive coefficient of 1.733, which was reduced from 1.904 before adding control variables; however, perceived capabilities remain statistically significant. Therefore, the alternative hypothesis is accepted. Gender and educational attainment have positive coefficients, 0.090 for gender and 0.000 for educational attainment, respectively, but they are not statistically significant. Age and employment status have negative coefficients, -0.096 for age and -0.091 for employment status, respectively, and are statistically significant.

The outcomes indicate that even when accounting for other variables, perceived opportunities do not significantly influence EA, while the impact of perceived capabilities on EA is confirmed. Additionally, in this case, females are more inclined to engage in EA than males; as individuals get older, their likelihood of engaging in EA decreases; there is no relationship between educational attainment and EA, and employed individuals are less likely to engage in EA compared to those who are unemployed.

Table 8: Logistic Regression of all Variables

	Dependent variable:	
	TEA	
	(1)	(2)
Perceived Opportunity	0.160	0.111
	(0.157)	(0.161)
Perceived Capabilities	1.904***	1.733***
	(0.235)	(0.238)
Gender		0.090
		(0.146)
Age		-0.096*
		(0.057)
Education		0.00003
		(0.0002)
Employment		-0.091***
		(0.013)
Constant	-3.619***	-1.866***
	(0.225)	(0.481)
Observations	2,074	2,074
Log Likelihood	-679.454	-647.448
Akaike Inf. Crit.	1,364.908	1,308.896
Note:	*p<0.1;* ***p<0.05;*** p<0.01	

Table 9 below displays the odds ratios for the logistic regression mentioned earlier. The odds ratios suggest that perceived opportunities alone are insufficient to motivate individuals to participate in EA, whereas perceived capabilities play a significant role. Additionally, females are 9% more likely to engage in EA, while with each increase in age, the likelihood of engaging in EA decreases by 9%. Education does not appear to impact EA, and employed individuals are 9% less likely to engage in EA.

Table 9: Odds Ratio of all Variables

	OR	Estimate	Std. Error	z value	Pr(> | z|)
TEA	0.155	- 1.866	0.481	-3.881	0.0001
Perceived Opportunities	1.118	- 0.111	0.161	0.692	0.489
Perceived Capabilities	5.660	- 1.733	0.238	7.291	0
Gender	1.095	- 0.090	0.146	0.620	0.535
Age	0.909	- 0.096	0.057	-1.668	0.095
Education	1.000	- 0.00003	0.0002	0.215	0.830
Employment	0.913	- 0.091	0.013	-7.108	0

6.5. Discussion

Contrary to the emphasis of previous research and social cognitive theory on the role of perceived opportunities in influencing EA, this research indicates that perceived opportunities do not predict EA among entrepreneurs in the formal and informal sectors of South Africa. These results suggest several things. Firstly, contrary to the social cognitive theory postulation, individuals in South Africa do not perceive good entrepreneurial opportunities because their environment does not promote an entrepreneurial culture. Instead, the focus is on getting employed. Most individuals work full-time or part-time; therefore, they do not perceive entrepreneurial opportunities in their environment because they are occupied with work. Fatoki (2010) and Fatoki and Chindoga (2011) found that individuals in SSA are less likely to create entrepreneurial start-ups; instead, they prefer working for private and public companies. Secondly, the results suggest that individuals in South Africa are motivated by other factors rather than the perception of opportunities to engage in EA. Thirdly, the results suggest that despite respondents being from formal and informal sectors, there were more respondents from the informal sector. These individuals are motivated by adverse economic conditions such as unemployment or poverty. Therefore, they did not perceive entrepreneurial opportunities within their environment.

The results of this research indicate that perceived capabilities predict EA in South Africa. These results are consistent with the findings by Bashir *et al*. (2020), who found that perceived capabilities influence EA. Therefore, these results suggest that

individuals who perceive themselves as possessing the skills, knowledge, and experience required to create an entrepreneurial venture are more inclined to engage in EA in South Africa. Furthermore, based on social cognitive theory, individuals who perceive themselves as being entrepreneurially capable are more likely to have access to or perceive educational opportunities available in their environment, influencing them to engage in EA. Most respondents have some school exposure; their education might have exposed them to entrepreneurial education, which focuses on imparting entrepreneurial skills and knowledge and enhancing students' awareness of attributes vital to entrepreneurship (Aga & Singh, 2022). According to Bashir *et al*. (2020), perceived capabilities are crucial in the life cycle of a business. Perceived capabilities allow an entrepreneur to be proactive and develop strategies to diversify, grow, and further innovate at any stage of the business (Staniewski, 2016).

The results reveal that gender and educational attainment do not predict EA in South Africa. These results, in contrast to Santos *et al*. (2017), who found gender to be a significant influencer of EA, suggest that gender does not play a role in an individual's desire to engage in EA. The results further support that gender and educational attainment do not significantly predict EA in South Africa. This means that whether an individual is female or male or has some school exposure does not influence their engagement in EA in South Africa.

The research also indicates that age and employment status negatively predict EA in South Africa. These results suggest that as individuals age or get employed full-time or part-time, they are less likely to engage in EA. This reveals a complex interplay where being employed and advancing in age emerge as significant hurdles to pursuing EA. This suggests that individuals who are unemployed are more predisposed to venture into EA. This inclination could stem from a need to generate income or having more time at their disposal, coupled with a greater willingness to take on risks. Unemployment might push individuals to explore entrepreneurial ventures as a means to sustain themselves, while those with more free time might see it as an opportunity to pursue business ideas they are passionate about. Additionally, younger individuals often exhibit a higher risk tolerance, viewing entrepreneurship as a viable path to make their mark. It is important to note that these results are not absolute, and other factors may be at play.

7. Conclusion

The frequencies and proportions tables presented indicate that most respondents are not involved in EA, perceive opportunities and capabilities, are primarily female and have some education experience. Furthermore, the results of the correlation matrix show that both perceived opportunities and perceived capabilities are associated with EA in South Africa.

The logistic results indicate that perceived opportunities do not predict EA in South Africa. Therefore, the null hypothesis is accepted. SSA comprises various diverse countries. In some countries, the emphasis is on individuals getting a job instead of engaging in EA. A possible explanation is that a job provides security and surety of an income. Therefore, EA might seem daunting as it requires time and effort, and there is no certainty of a fixed income. Consequently, this might discourage individuals from perceiving entrepreneurial opportunities in South Africa. Furthermore, unemployment and poverty in South Africa might make it impossible for individuals to perceive entrepreneurial opportunities as they are more likely to be motivated by adverse conditions to engage in EA for survival.

The results of this research are significant as they indicate that perceived capabilities predict EA in South Africa, a finding that supports the alternative hypothesis. This is particularly noteworthy given the country's diversity, where individuals are exposed to entrepreneurial education, enabling them to acquire the skills, experience, and knowledge essential for EA.

Moreover, the results of this research challenge existing literature, indicating that gender and educational attainment do not influence EA in South Africa. This novel finding contradicts the common belief that men are more likely to engage in EA due to confidence in their abilities and that women's domestic duties hinder their engagement. Similarly, the finding that education does not significantly impact EA is a departure from existing literature.

Finally, this research's results have practical implications, suggesting that age and employment status can negatively influence EA. These findings challenge existing literature, often suggesting that age and employment status are not significant factors. The implication is that individuals who are older or employed full-time or part-time may need additional support or incentives to engage in EA.

Chapter Five

8. Conclusion

Entrepreneurship, a catalyst for economic advancement, holds immense potential to address the socioeconomic challenges prevalent in SSA. The urgency to comprehend the factors shaping entrepreneurial participation in SSA is underscored by the fact that these influences are not universally applicable and have been underexplored in the context of SSA, thereby amplifying the significance of this research.

This research, focusing on the impact of perceived opportunities and capabilities on EA in both formal and informal sectors of SSA, has yielded substantial insights. The pivotal research question that steered this research was: Do perceived opportunities and capabilities influence EA in SSA? The answer to this question is pivotal in comprehending and fostering entrepreneurship in the region.

Chapter one of the research laid the foundation by providing a discussion of the background of the research. Furthermore, the research question, research hypothesis, the research's purpose, the significance of the research, limitations, and ethical considerations were discussed.

Chapter two of the research focused on a discussion of previous literature. The discussion centred primarily on social cognitive theory, perceived opportunities, and perceived capabilities. Findings from previous literature indicated that social cognitive theory plays a crucial role in explaining why individuals might engage in EA. Furthermore, the literature indicated that perceived opportunities influence EA in SSA. Furthermore, entrepreneurial alertness plays an essential role in the perception of opportunities. Moreover, the literature indicated that perceived capabilities influence EA in SSA, implying that those who perceive themselves as having the skills, knowledge, and experience were more likely to engage in EA.

Chapter three of the research delved into the research methodology, providing a comprehensive understanding of the research's approach. The discussion centred on the research design, which was a descriptive research design chosen to describe the relationships between perceived opportunities, capabilities, and EA in SSA. The data preparation method was also detailed, with data retrieved from the GEM website and prepared for analysis in “R” statistical software version 4.3.3 within the “R” Studio

development environment. The chapter further elaborated on the data source, outlined a summary of the variables, and discussed the method of analysis, which involved logistic regression to test the research hypothesis and answer the research question.

Chapter four of the research focused on discussing the research's results. The frequencies and proportions indicated that fewer individuals were involved in EA in South Africa in 2019; most of the respondents perceived entrepreneurial opportunities and perceived themselves as possessing the skills, knowledge and experience essential for participation in EA. Furthermore, most respondents were females between the ages of 25 and 34, working either full-time or part-time, and had some secondary education. The summary statistics indicated that, on average, most respondents perceived themselves as possessing the skills, knowledge, and experience essential to engage in EA. Furthermore, the correlation matrix indicated that perceived opportunities and perceived capabilities were significantly associated with EA. Lastly, the logistic regression models indicated that perceived opportunities do not predict EA, therefore accepting the null hypothesis. Furthermore, the logistic regression results indicated that perceived capabilities predict EA in South Africa.

Policy implications

- It is imperative for government bodies to facilitate greater access to financial resources for budding entrepreneurs. This is attainable through developing policies focused on reducing financial barriers and providing easier access to capital.
- Governments should prioritise creating and implementing programmes designed to foster a national culture supportive of entrepreneurship. Such programmes should emphasize entrepreneurship as a commendable and viable career path.
- Policies should be designed to educate the public about the benefits of self-employment and to reward entrepreneurial success at all levels. This would include creating awareness of the economic and personal growth opportunities that entrepreneurship offers.
- It is essential to have policies that support self-employed individuals and small businesses, even if they are not formally registered at the inception of their operations. This support could include legal guidance, business advice, and

temporary exemptions from certain regulatory requirements to encourage formalization over time.

9. Future work

This research's limitation is that it used data from the GEM website, which, as of the research date, has the latest data for 2019. Future studies can use the latest data from diverse data sets to investigate the factors influencing SSA's EA. This will enable readers to understand the EA in SSA at present. The second limitation of the research is that the GEM data conflates entrepreneurs operating in the formal and informal sectors into one instead of providing two separate variables. Future research can focus on using data from different sources that separate formal and informal sectors into two separate variables. This will provide a rich understanding of the factors influencing EA amongst entrepreneurs in each sector. The third limitation of the study is that only one country was selected for the analysis. Therefore, the results are not representative of EA in the entire region. Future research can focus on including more than one country to the analysis for better representation.

Furthermore, this research used social cognitive theory to explain the influence of perceived opportunities and perceived capabilities on EA. However, the theory is criticised for not being context-specific. Therefore, considering the diverse nature of SSA countries, future research can use other, more appropriate theories to assess the motivation to become involved in EA in SSA. Furthermore, future research can focus on using more than just correlation matrix and logistic regression to investigate the motivation to partake in EA.

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