An assessment of the determinants of IT entrepreneurs' level of awareness of the most common causes of start-ups failures in Johannesburg, South Africa.

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DECLARATION

I, Nhlamulo Mkhavele, declare that this research article 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 Business Administration in the Graduate School of Business Administration, University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

Nhlamulo Mkhavele

Signed at ……

On the 19 day of February 2023

DEDICATION

I dedicate this research paper to the Almighty God, who has been guiding me every step of the way and giving me strength and courage to see this project through. To my late mother Tinyiko Mkhavele, who taught me the importance of hard work, dedication and never giving up. To my father Hlengani Mkhavele, who showed me the value of education and encouraged me to pursue my dreams. To my sisters Ntsako and Ntsakisi Mkhavele, who always believed in me and supported me throughout my academic journey. To my nephew Risima, who inspired me to reach for the stars. And to my Fiancé, who has been my rock and my strength throughout this process. I thank you all for your unconditional love and support.

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ABSTRACT

In South Africa, more than 70% to 80% of small to medium-sized businesses (SMMEs) fail within the first three years. In order to gain insight into the level of awareness of IT start-up entrepreneurs regarding the causes of SMME failure, this study conducted an empirical review of the literature and developed a hypothetical framework, the study builds on the work done by Justino Vicente on the factors influencing the failure of small enterprises in order to achieve its objective. It then makes recommendations for future research on the topic. In the aftermath of several economic adversities, prominent among them unemployment, poverty, and HIV and AIDS, SMME failure and success are key among national strategic concerns in the Republic of South Africa, where this study is being conducted in the Johannesburg region. The research employed a quantitative research methodology and the main instruments for gathering data was a survey/ questionnaire, and the snowball sampling method was used. 100 ICT start-ups owners and managers received surveys. The statistical package for the social sciences (SPSS) program was employed to analyse the quantitative data collected. Tables, pie charts, and bar charts were used to display the statistically descriptive results. Due to the many different reasons why SMMEs fail, this study focused its conclusions on the following factors: determinants of IT entrepreneurs' level of awareness of the most common causes of start-ups failures in Johannesburg, South Africa, determinants of accessibility to information of the most common causes of start-up failures and the willingness of entrepreneurs to consume information related to start-up failures were also presented. Among the results of failure include unemployment, societal ills, poverty, and loss of revenue. The study concludes by recommending various interventions to improve the level of awareness.

Keywords: Entrepreneurship, Information technology, Small and Medium Enterprises (SMMEs), Start-up failures, Johannesburg.

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CHAPTER 1: INTRODUCTION

1.1. Purpose of the study

The purpose of this research is to assess IT entrepreneurs' level of awareness about the most common causes of start-ups failures in Johannesburg, South Africa.

1.2. Context of the study

The South African economy has been struggling to create jobs and to offer young people meaningful economic opportunities according to (Mashamaite, 2018). The effects of unemployment were further exacerbated by the emergence of Covid-19 and the lockdowns which were imposed by the government resulted in job losses for people living in South Africa according to (Dorrit Posel, 2021). Small, Medium and Micro Enterprises ("SMMEs") are a major source of employment growth in various regions in the world, including South Africa and they frequently help local communities maintain their identity and social cohesiveness (Wholesale and Retail Seta (WRSETA), 2022). SMMEs are the most common type of enterprise and source of employment. They are vital stakeholders in fostering social cohesion, economic resilience, and growth that is more inclusive and sustainable. Nonetheless, the environment in which an entrepreneurial activity takes place has a significant impact on its success. One of the biggest contributors to the economy in terms of job creation has been small businesses, meaning that the success of start-ups is of great importance to the South African economy in terms of its ability to create jobs and offer young people meaningful economic opportunities (Bhorat & Asmal, 2022). According to (Dhanah, 2016) there is consensus that small businesses play a critical role in the creation of employment and overall economic stimulation and as of recent small businesses have struggled to create meaningful employment.

In South Africa, the IT sector is regarded as one of the fasted growing or high growth industries and as a result it has been contributing significantly to the creation of jobs. Also, in line with the research conducted by (Smit, 2013) high growth and high potential industries possess the highest potential to contribute significantly to job creation in the future if they are well supported.

Over the years, there have been various studies which have been conducted that have indicated that most of the start-ups that are started within the IT industry go on to fail or go out of business within the first 36 months of inception (Harvard Business Review, 2021; Bushe, 2019; Solomon, G., Frese,

M., Friedrich, C., Glaub, M. (2013). The reasons for failure include *management talent and experience, financial problems, product problems and market problems* (Zondi, 2017; Habiyaremye, King, & Tregenna, 2022).

According to (Kalyanasundaram, 2018) the awareness of risk was high amongst entrepreneurs and being aware of pitfalls helped entrepreneurs to become successful in their ventures. One of the reasons for failure as the study points out amongst entrepreneurs is that the failed entrepreneurs lacked mentorship and were therefore not aware of pitfalls which usually led to the failure of their start up. (Anitsal, 2014) further points out that entrepreneurs who seek knowledge before starting a venture have better chances of success.

1.3. Problem statement

1.3.1. Main Problem

Despite the strong policy formulation and intervention for youth, unemployment has remained a challenge for stimulating job creation, especially for young people in South Africa. Institutions and prevailing markets have struggled to cater adequately for social needs and, consequently, youth unemployment in South Africa has risen to crisis levels (Lannoy, 2016). Over the last decade, South Africa's growth lagged: the GDP per capita was already lower in 2019 than in 2018. The unemployment rate is still high, at around 35%, reaching 50% for youth (Organisation for Economic Co-operation and Development, 2022).

According to (Kulathunga, 2019) one of the main determinants of economic success and development is the success of small and medium-sized enterprises (SMEs) in a country, (Kulathunga, 2019) explains that Having a strong SME sector is crucial to establishing a solid industrial sector in an economy and that they are the of vital importance in the creation of jobs and new employment opportunities for the unemployed.

In (Kalyanasundaram, 2018), the scholar points that the level of awareness about the pitfalls when running a business increases the chances of success and that poor awareness led to the failure of business ventures. To understand the problem of failure and to increase the chances of success in the future for SME's, it is necessary to understand entrepreneurs' level of awareness of the most common causes of start-ups failures in Johannesburg, South Africa.

1.3.2. Sub problem

- The first sub problem to the main problem of entrepreneurs' level of awareness is the availability of information about the causes of IT start-up failures.
- The second sub problem is the accessibility of such information.
- The third sub problem is the willingness of the entrepreneur to consume information related to the topic of failure; is the typical IT start-up owner willing to gather knowledge about the causes of failures for such businesses?

1.3.3. Aim of the study

The main aim of the study is to assess level of awareness of the most common causes of start-ups failures in Johannesburg, South Africa.

1.3.4. Objectives of the study

- To assess the determinants of IT entrepreneurs' level of awareness of the most common causes of start-ups failures in Johannesburg, South Africa.
- To evaluate the factors that contributes towards the willingness to consume information related to start-up failures among IT start-up owners in Johannesburg, South Africa.
- To explore the factors that determine accessibility to information on the most common causes of start-up failures among IT start-up owners in Johannesburg, South Africa.

1.3.5. Research questions

- What are the determinants of IT start-up entrepreneurs' level of awareness of the common causes of IT start-ups failures in Johannesburg, South Africa?
- What are the factors that contributes towards willingness to consume information related to start-up failures among IT start-up owners in Johannesburg, South Africa?
- What are the factors that determine accessibility to information on the most common causes of start-up failures among IT start-up owners in Johannesburg, South Africa?

1.4. Significance of study

This study provides useful information about the level of awareness about the cause of business failures in Johannesburg, South Africa. The study will be used in the future to inform decisions about

where resources should be focused when injecting resources to increase the chances of success of IT start ups in Johannesburg.

The study fills in a gap in that most of the available literature only goes on to identify the problems and the cause that have cause IT start ups to fail but little has been done when it comes to research to establish the awareness of entrepreneurs who are running start-up businesses and who have not yet reached the stage where their business would be considered to have failed or survived the first 36 months of these problems which have caused so many of the IT start ups to fail.

The study also creates knowledge about what some of the driving factors are behind the level of awareness an IT entrepreneur has about the cause of start-ups in IT in Johannesburg, South Africa. The study also highlights the level of willingness to learn and consume information about the causes of business failures amongst start up IT entrepreneurs in Johannesburg South Africa.

1.5. Delimitation of study

The study is focused within Johannesburg, Gauteng South Africa and focused on entrepreneurs who are running an IT start up, the study did not focus on those that have already failed. Those that have already failed have been eliminated from the study due to the lack of availability information about entrepreneurs who have already failed not being readily available and could potentially be difficult to find.

1.6. Contribution of the research

The study sheds insight into the level of awareness about the causes of business failures amongst entrepreneurs in the IT industry in Johannesburg, Gauteng province. The findings provide future business owners, managers, and stakeholders with valuable information on the elements that are crucial to the success or failure of IT companies in Johannesburg. With this information, they are better equipped to make informed business decisions and stay clear of pits and potential risks that might spell disaster. Successful small enterprises that come from this will diversify the economy, create jobs, and reduce poverty. Additionally, this study offers recommendations that may assist the government develop policies that are successful and that might also improve the scant information available on small company failure in Johannesburg and eventually South Africa.

1.7. Outline of chapters

Chapter One: An overview of the study and the research subject are provided. The statement of the research problem is followed by the objectives and research questions.

Chapter Two: To obtain information and get a broader perspective on variables leading to failure, a thorough literature research is conducted on all facets of the reasons of small company failure generally. This chapter also discusses business environmental elements that hinder the growth and viability of businesses in South Africa.

Chapter Three: This study's research methods and design are addressed. The focus is on the study field, target population, data collection equipment design, and actual data collecting experience. It is also on the research methodologies and procedures.

Chapter Four: The findings from the empirical research, which was conducted on managers and owners of small firms in Johannesburg, are given, analysed, and discussed in Chapter four. Examined are the findings of a survey of environmental factors affecting small businesses, including those that do and do not contribute to failure.

Chapter Five: Chapter five outlines recommendations and conclusions drawn from the research. The chapter also offers.

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

The preceding chapter focused on entrepreneur's level of awareness of causes of business failure of IT start-ups in Johannesburg as a potential problem. This informed primary goal to carry out the study.

The purpose of this chapter is to emphasize literature-cited reasons of failure in SMMEs as explanations for SMME failure occurrences to guide the research methodology. This chapter provides an analysis of the existing research on the causes of small business failure. A literature review according to (Yin, 2011), tries to synthesize a collection of information connected to a certain issue, emphasizing various and advanced logical concepts about the topic. This chapter

comprises a study of the literature on the failure of SMMEs. It further delves into the reasons for failed businesses to gain perspective into why there is such an alarming rate of failure of SMMEs. The researcher investigated interpretations and tendencies in literature from South Africa and other regions. This study was designed to fill a vacuum left by previous studies.

Bhattacherjee (2012) and Yin (2011) contend that the primary objective of a literature review is to focus on the primary theme of the subject matter under review, method, and reliable sources of data, while also analysing relevant theories and findings related to the subject being studied and any gaps that need to be filled. Considering these viewpoints, the objective of this chapter is to present a basic summary of the research that is currently available on the variables that affect small business failure globally.

2.1. Small and medium-sized enterprises (SMMEs) in South Africa

SMMEs in South Africa have been categorised according to the industries or contexts in which they operate. In South Africa, SMMEs are defined in a variety of ways, most typically by the size of the firm, notably the number of personnel or the range of turnover bands. SMMEs as enterprises are classified by having an annual revenue ranging from R150 000 to R20 million, and registered entities with less than 250 workers (Kunene, 2014; SME South Africa, 2022). Section 1 of the National Small Business Act of 1996 (NSB Act), as modified by the National Small Business Amendment Acts of 2003 and 2004, defines a small business as "a separate and independent commercial entity, consisting of cooperative businesses and nongovernmental organizations, controlled by one or more owners, and predominantly carried on in a sector or sub-sector of the economy stated in Column I of the Act, including its branches or subsidiaries, if any."

SMME's are a source of innovation, the main source of economic development and competitive advantage to many developing countries (Adeniran & Johnston, 2012). SMMEs are a significant contributor to the gross domestic income of South Africa and according to the study. In South Africa SMME's face a lot of challenges which threaten their survival, and they fail at a rate of 70% to 80% (Matekenya & Moyo, 2022).

2.2.Theoretical framework of study

Competency-based theory of the firm (CbTF) is about competitiveness or survivability, this theory strongly connects this research study issue. CbTF, which is based on the Austrian School market process theory (Freiling D.-K. J., 2015), deals with the concept of trial and error. People build expectations based on previous information as a reference point for decision-making due to the market's incomplete and asymmetrically spread knowledge. Because of ambiguity, the eventual result of decisions is frequently different from what was predicted. This results in revised expectations and new behaviours, and so forth. However, there might be significant variations amongst entrepreneurs depending on the availability and application of information and skills. Researchers acknowledge that CbTF is adequate for explaining entrepreneurial difficulties related to assets, resources, skills, and capabilities, and we apply the language proposed by (Freiling et al., 2008).

When one compares the reality of start-up endeavours in the context of entrepreneurial failure, they find that this set of assumptions is capable of reflecting entrepreneurship reality to a great extent. In this regard, the researcher used the Competency-based theory of the firm (CbTF) to create cause-and-effect structures that shed light on entrepreneurial failure as the dependent variable by addressing company resources and competencies as critical drivers of failure processes.

2.3.Failure and risk factors

According to (Bushe, 2019), failure is the inability to attain any given business goal. It is the opposite of success; it demonstrates that the business did not meet its goals. (Farias, 2021) maintain that failure is defined as a situation in which a firm is fulfil its financial obligations to its workers, shareholders, and suppliers, or a bill is overdrawn, or the firm is declared bankrupt by law. According to (Lattacher & Wdowiak, 2020) failure is the entrepreneurial exit, cessation, insolvency, or organizational death of a small business. As a result, one might determine that failure is a state that leads a small firm to abandon operations due to a lack of funds.

(Freiling & Freiling, 2012) refer to previous studies in entrepreneurship as mainly addressing the symptoms of failure without addressing the cause of the failure. The authors found the CbTF theory to be capable of explaining the cause of business failures. The authors use the CbTF to explain that

there are three causes of failure; the first is a lack of embeddedness in the market in which the

entrepreneur operates, the second is the principles and mental structures of decision making and the third is lack of achievement of goals which lead to investor scepticism.

2.4. Challenges faced by start ups

According to (Öndas & Murat, 2021) and (Arasti, 2014), there are four main problems as to why Entrepreneur start-ups go on to fail within the first 36 months and the reasons were addressed in this section.

Product problems

According to recent literature, product problems in tech start-ups can be categorised into two main areas. Firstly, there are difficulties associated with the timing of product launch in a rapidly evolving technological landscape (Tomy & Pardede, 2018). Start-ups must carefully consider the appropriate timing to introduce their product into the market, as delays may render the product obsolete or allow competitors to launch superior alternatives (Mocker, Bielli, & Haley, 2015). Secondly, product design issues arise due to the founders' limited knowledge and a lack of market-oriented focus during the early stages of start-up development (Öndas, 2021). Often, founders prioritise their own ideas or preferences over understanding market demands, resulting in a mismatch and failure to successfully launch the product (Dickmann, 2023).

Market problems

Sevilla-Bernardo, Sanchez-Robles, & Herrador-Alcaide, 2022 explored the attitude that start-ups often encounter two primary challenges: small market size and distribution issues. The small market problem arises when start-ups have a limited customer base, leaving them vulnerable to the risk of business closure if even a single client decides to cancel their purchases (Eisenmann, 2021). The scarcity of clients makes it crucial for start-ups to diversify and expand their customer portfolio to mitigate this risk (Organisation for Economic Co-operation and Development (OECD), 2015).

Furthermore, start-ups in the South African context face difficulties in finding suitable distribution channels due to the dominance of larger, established companies in the market (PricewaterhouseCoopers (PWC), 2015). Buyers tend to prefer working with well-established companies that offer reliable distribution networks (Capobianco , 2021). Start-ups often struggle with developing an effective selling strategy, which hinders their ability to establish distribution channels and restricts them to selling their products to any willing buyer (International Trade Administration , 2023).

Financial problems,

Lack of funding has been identified as a significant challenge leading to the failure of start-ups. Many start-ups struggle to secure the necessary funding required for their operations (Eisenmann, 2021). The lack of financial support often forces start-ups to rely on funding from their founders (Asoba & Mefi, 2022). This reliance stems from the difficulty of accessing funding from financial markets and other sources typically available to more established companies (Organisation for Economic Co-operation and Development (OECD), 2015).

Managerial problems,

According to (Akdeniz, 2016), failure can be caused by both internal and external factors. Internal factors are described as those factors that are under the control and influence of management whereas external factors are described as those factors which are external from the organization and as a result management does not have control over those factors. The literature further gives example of cause of business failures as overspending of financial resources and spending (investing) money on the wrong things which in the end create financial problem for entrepreneurs which result in business failure in the end.

Most IT start-ups are run by individuals with an engineering background usually (Perry, 2001) with product experience but very limited managerial experience.

2.5. Implications of failure

(Clifford, 2009; Rosi, et al., 2019) assert that failure has been shown to affect future performance in both negative and positive ways. The article also discusses entrepreneurial learning and identifies the following as some of the things that come out of failure in entrepreneurship:

2.5.1. Entrepreneurs benefit from previous failures

The article describes past failures in business as a critical creator of learning opportunities in business, it talks about how businesses should allow for failure through learning. This might

however not always be an opportunity for learning if an organization is small. For most small organizations failure could mean the end and the shutting down of the organization due to limited resources available. The article points out that previous entrepreneur failure is more associated with having a positive attitude towards failure and what would be described as not being afraid to fail type of attitude which can benefit entrepreneurs significantly. (Choi and Shepherd, 2004) recognizes past failures of entrepreneurs as a steppingstone towards the recognition of new opportunities and the exploitation of those opportunities. The article recognizes that people who have previously learned skills either through employment or past failure in business are more likely to go into new opportunities given that past errors and failures make the probability of failure and loss to be reduced.

(Mauthe and Otieno, 2022) suggest that business incubators play an important role in the development of small businesses. According to the study conducted a hub fosters an enabling environment in which a community of entrepreneurs may flourish. A Hub creates the opportunity for entrepreneurs to meet key players in the economy such as fellow entrepreneurs, potential investors, and individuals they would not meet normally by chance. Incubators play an important role of creating an opportunity for entrepreneurs to meet potential mentors and individuals who have had the opportunity of starting up businesses in the past, those with valuable knowledge and experience which can assist start up entrepreneurs.

According to the available literature, businesses that go through incubation hubs are more likely to succeed as compared to their equivalents who do not go through a business incubator. (Otieno, 2022) states that 85 percent of businesses that graduate from incubators are still in operation after 5 years which is different from the 80 percent failure rate of start-ups that go on to fail within the first 5 years of operation. The study pointed that incubators help entrepreneurs with some of the challenges that come with running a newly founded business such as helping them find a working space, initial seed capital, coaching and training.

The positive impact of incubators has been widely acknowledged, however, a study conducted by (Mauthe and Otieno, 2022), suggests a gap between what incubators can do and what they are doing, largely due to limited resources. These resources include financial support, qualified human

resources, and partners to support programs for entrepreneurs. Assistance offered by incubators, such as initial seed capital, coaching and training, have been found to help overcome some of the common pitfalls identified in studies, such as lack of financial resources and management experience. Nevertheless, incubators often struggle to acquire these resources, leading to financial difficulties and the inability to fulfil their mandate.

South Africa has the best entrepreneur ecosystem in Africa owing largely to its infrastructure. South Africa's entrepreneur ecosystem is not without problems and bottlenecks which need to be resolved to create a better ecosystem (Mason & Brown, 2014).
The article identifies the following as some of the challenges that the South African entrepreneur ecosystem faces as challenges currently:

Access to finance from formal finance institutions

South African start-ups encounter significant difficulties in accessing funding from formal institutions, including banks and venture capitalists (Padiaychee, 2016). This lack of funding can be attributed to several factors. Firstly, many start-ups do not meet the criteria set by these institutions, resulting in their disqualification from funding opportunities (Burger, 2023). Additionally, South Africa lacks a well-developed market for venture capitalists, restricting funding options primarily to limited subsectors within the financial services industry (Financial Sector Conduct Authority, 2022).

Red tape and collateral requirements further exacerbate the funding challenges faced by small businesses (Mabasa, 2018). The bureaucratic processes and stringent collateral demands imposed by formal institutions make it difficult for start-ups to access the necessary funds for their operations (Mpofu & Sibindi, 2022). Furthermore, poor credit ratings of some entrepreneurs hinder their ability to obtain credit from formal institutions that offer financial assistance (Organisation for Economic Co-operation and Development (OECD), 2015).

2.5.2. Red tape and structural inequality

Red tape and structural inequality contribute to bottlenecks in start-ups' market access and their ability to attract skilled individuals. Small businesses often face challenges in navigating bureaucratic processes and regulations, which can impede their market entry and growth (Organisation for Economic Co-

operation and Development (OECD), 2015). Moreover, due to financial constraints, small businesses may struggle to employ experienced and qualified individuals, as they are unable to compete with established firms in offering competitive compensation packages (OECD, 2017). This limitation hampers their growth potential and restricts the types of skills they can attract (Braňka , 2016).

Another significant issue is the lack of an innovation curriculum, which further exacerbates the skills bottleneck for small businesses. Inadequate emphasis on innovation education and training within the educational system results in a shortage of individuals with the necessary skills and knowledge to drive innovation in start-ups (International Labour Organization, 2021). The absence of a focused innovation curriculum limits the availability of skilled talent in the market that small businesses can attract and utilize effectively.

2.5.3. Education

South Africa faces significant challenges due to high levels of illiteracy, which directly affects the human capital skills available to businesses, including small businesses and start-ups (Department of Higher Education and Training, 2022). The prevalence of illiteracy contributes to a shortage of individuals with the necessary qualifications and skills that small businesses require (TripleE Training , 2022).Moreover, well-qualified individuals are often sought after by larger firms, making it challenging for small businesses and start-ups to attract such talent due to affordability constraints (World Economic Forum, 2022).

The cost of education in South Africa is identified as a key factor contributing to the lack of adequately qualified individuals. The high cost of education restricts access for many individuals, exacerbating the skills shortage (Mlachila & Moeletsi, 2019). Efforts to make education more accessible and affordable have been limited, resulting in exclusion from the education system for many individuals (Department of Higher Education and Training, 2022).

2.5.4. Regulations and red tape

The regulatory environment in South Africa poses significant challenges for entrepreneurs and start-ups, with a plethora of laws and regulations that must be adhered to (Nieuwenhuizen, 2019). This complex regulatory landscape often hampers the efficiency of start-up operations and serves as a deterrent for aspiring entrepreneurs (Mpofu & Sibindi, 2022)The burdensome regulatory requirements result in inefficiencies and increased costs, making it impractical for many start-ups to achieve success within the borders of South Africa (Mabasa, 2018).

2.6.Hypothesis for objectives

Hypothesis for objective 1: To assess the determinants of IT entrepreneurs' level of awareness of the most common causes of start-ups failures in Johannesburg, South Africa.

H1 - Age is a determinant of lack of awareness of causes of start-up failure among IT entrepreneurs in Johannesburg.

H1 - Gender is a determinant of lack of awareness of causes of start-up failure among IT entrepreneurs in Johannesburg.

H1 - Education level is a determinant of lack of awareness of causes of start-up failure among IT entrepreneurs in Johannesburg.

H1 - Courses attended determine lack of awareness of causes of start-up failure among IT entrepreneurs in Johannesburg.

H1 -Number of employees determine lack of awareness of causes of start-up failure among IT entrepreneurs in Johannesburg.

H1 - Lack of a business mentor as a role model is one of the determinants of lack of awareness of causes of start-up failure among IT entrepreneurs in Johannesburg.

H1 - Lack of a business plan is of the determinants of lack of awareness of causes of start-up failure among IT entrepreneurs in Johannesburg.

Hypothesis for objective 2: To evaluate the factors that contributes towards the willingness to consume information related to start-up failures among IT start-up owners in Johannesburg, South Africa.

H1 - Age influences willingness to consume information related to start-up failures among IT start-up owners in Johannesburg, South Africa.

H1 - Gender influences willingness to consume information related to start-up failures among IT start-up owners in Johannesburg, South Africa.

H1 - Education level influences willingness to consume information related to start-up failures among IT start-up owners in Johannesburg, South Africa.

H1 - Lack of a business mentor as a role model influences willingness to consume information related to start-up failures among IT start-up owners in Johannesburg, South Africa.

H1 - Lack of a business plan influences willingness to consume information related to start-up failures among IT start-up owners in Johannesburg, South Africa.

Hypothesis for objective 3: To explore the factors that determine accessibility to information on the most common causes of start-up failures among IT start-up owners in Johannesburg, South Africa.

H1 - There is no significant difference between accessibility to information on the most common causes of start-up failures among IT start-up owners based on age.

H1-There is no difference in accessibility to information on the most common causes of start-up

failures based on gender.

H1 - There is no significant difference between accessibility to information on the most common causes of start-up failures among IT start-up owners based on education level.

H1 - There is no significant difference between accessibility to information on the most common causes of start-up failures among IT start-up owners based on access to a successful businessperson as a mentor or role model.

H1 - There is no significant difference between accessibility to information on the most common causes of start-up failures among IT start-up owners based on business.

2.7.Conclusion

This chapter gave a general overview of small businesses both domestically and abroad. It also evaluated the literature on business failure as a phenomena and numerous other ideas related to start-ups failure. It included an overview of the idea of failure, a theoretical model of failure, and explanations for why companies fail. The subsequent chapter will provide the study's research methodology.

CHAPTER 3 RESEARCH METHODOLOGY

3.1. Introduction

According to (Rajaskar et. Al., 2006) cited in (Goundar, 2012) research is described as an investigation with a purpose of finding solutions into social and scientific problems. The information which is used to gather information about the topic is human beings, experiences, books, journals etc. The study also asserts that it is only through research that we can make advancement in any field.

One of the most important aspects of conducting research into a problem is that the set procedures which are meant to deliver research results should not be biased and should not be set to come to a certain set outcome. There are different methods which are used to conduct research such as qualitative and quantitative methods.

The research methodology used for the purposes of this study was a quantitative study whereby data was collected from different entrepreneurs and then analysed. The study method of using a quantitative methodology is appropriate given that the aim of the study is to establish the most prevalent factors amongst entrepreneurs who own a start-up within the IT sector. The study established the determinants of IT entrepreneurs' level of awareness about causes of business failures.

Research Setting

Table: Research Setting

Research Approach	Quantitative
Research Design	Grounded theory
Data Collection Method	Internet survey
Research Strategy	Survey
Data Sources	ICT Entrepreneurs in Johannesburg, South Africa.

Selection Method	Snowballing
Sample Size	100

Table 1: Research setting

3.2. Research Design

According to (Asenahabi, 2019) research design is a plan that a researcher comes up with in order to set out the research and the data to be collected in such a manner that ensures that the results that are observed at the end of the research are in line with the objectives. For the purposes of this research the researcher utilized quantitative methods. Quantitative research design can be described as a method of utilizing mathematical, statistical, and computational techniques to observe and analyse research, resulting in factual and numerical data in findings. (Lawrence S. Meyers, 2016).

The researcher considered the following when choosing to use a survey:

- Surveys offer the data collector the ability to easily compare the results of the survey as collected from the different participants. From this research perspective collecting information using surveys allowed the researcher the ability to easily analyse and classify responses from different participants.
- Surveys offer a straightforward way of analysing data, and this method enabled the researcher the ability to classify data, plot graphs and observe trends.
- One of the benefits of employing a survey is its scalability; surveys are simple to comprehend, thus enabled a wide range of participants to partake in the survey.
- Participants to the survey were anonymous.

The researcher was aware of the following disadvantages of using a survey during the study:

- A risk that participants to the survey would provide answers which were not accurate.
- A risk of incomplete surveys.
- Incorrect and different interpretation of questions between participants.

3.3. Population and sample size

3.3.1 Target population

(Thacker, 2019) defines a population as a group of individuals who share the same traits and features. The IT start-up enterprises operating in Johannesburg were the study's target population. The researcher chose the Johannesburg region due to the wide variety of small enterprises there as well as the fact that it is the most industrialized and expanding city in the Gauteng province. According to this survey, small enterprises are those with a revenue of R150 000 to R20 million, and registered entities with less than 250 workers (Parker na, 2012; Kunene, 2014; Smesouthafrica, 2022).

3.3.2 Sample Size

The (FinMark Trust, 2010) suggests that the challenge of obtaining statistically valid sampling for small business studies is particularly complex when considering the small business sector. Due to the absence of a sampling frame, a non-probability sampling technique was employed for this research. A snowball sampling approach was employed, with participants being recruited through referrals from people who are already in the industry.

According to (Parker, 2019) given that the characteristics of the target population are uncertain, it is not feasible to take a probability sample. Parker goes on to say that Snowball sampling has become increasingly popular among researchers due to its networking capabilities and adaptability, making it an ideal recruitment method for research.

The researcher aimed to select a sample of 100 participants for this study, based on an average from prior studies which investigated analogous topics. The researcher examined previous studies and discovered that they had utilized comparable sample sizes., (Mofokeng, 2012) 120 participants were selected for the purposes of the study, (C.E, 2013) used 75 participants, (Arasti, 2011) recruited 80 participants, (Elizabeth & Santhiyavalli, 2019) utilized a sample of 23, (Yozi, 2009) utilized a sample of 25 and (Justino, 2015) utilized a sample of 104. The researcher considered the scope of his study, which was limited to the ICT industry, when determining the number of participants, whereas other studies encompassed all industries of the economy. According to Statistics South Africa, the ICT industry in Gauteng contributes less than 10% to the GDP.

Consequently, the sample size calculated would have been too small, prompting the researcher to take caution by selecting a target sample size of 100.

(Onwuegbuzie & Collins, 2007) demonstrated that, contrary to prior findings which suggested a minimum sample size of 30 participants for a social study, a sample size of 64 participants was necessary to obtain results with an acceptable statistical power in a social study.

3.4. Data Collection and Procedure

For the purposes of the research, an online survey was utilized. A questionnaire consists of several inquiries made to people to gather statistically significant data on a specific subject. Questionnaires may be a useful tool for generalising about whole populations or specific groups of people when they are well designed and implemented (Young, 2016). A questionnaire can have drawbacks, too, since skewed results may result from a lack of oversight (Sarantakos, 1998). Research surveys were conducted with the use of online surveys, a link was provided to prospective respondents where they followed a link and captured their responses on a multiscale research questionnaire. Results were captured by the online site and sent directly to the researcher for capturing. **Refer to the questionnaire in Appendix A**

According to (Rajaskar et. Al., 2006) cited in (Goundar, 2012) is defined as "a logical and systematic research for new information on particular topic." The document further describes research as an investigation with a purpose of finding solutions into social and scientific problems. The information which is used to discover the solutions to the solutions is human beings, experiences, books, journals etc. The study also asserts that it is only through research that we can make advancement in any field.

One of the most important aspects of conducting research into a problem is that the set procedures which are meant to deliver research results should not be biased and should therefore not be set to come to a certain set outcome. There are different methods which are used to conduct research such as qualitative and quantitative.

The research methodology to be used for the purposes of this study is a quantitative study whereby

data was collected from different participants in the study and then analysed to reach a conclusion. The study method of using a quantitative is appropriate given that the aim of the study is to establish the most prevalent factors amongst entrepreneurs who own a start-up within the IT space. The study established the determinants of IT entrepreneurs' awareness about causes of business failures within the first 36 months.

3.5. Data analysis

Descriptive statistics methodologies were used to analyse and interpret the information collected from the various respondents. DATA was inputted into SPSS and the descriptive analysis that of the data was analysed. The following statistics were analysed:

Regression and correlations

The researcher studied the correlation between variables, moreover they analysed the data to see if there is a relationship between entrepreneurs' level awareness about the causes of failure for IT start ups and the following independent variables:

- Age of the entrepreneurs,
- Education level,
- Gender,
- Education level,
- Number of employees, and
- Availability of business plans.

The study examined the different variables to see if there is a correlation between or different variables. The researcher purposed to determine if any of the dependent variable cause awareness to entrepreneurs or results in awareness.

3.6. Reliability and Validity

According to (Sürücü & Maslakçi, 2020) "The Validity and Reliability of the scales used in research are essential factors that enable the research to yield beneficial results." Reliability, according to the article is the ability of the measuring instrument to give consistent results when used

at different times. A reliable research instrument should be in such a way that should it be used by other researchers it will be able to produce consistent results. The reliability of the research instrument is ensured by using a similar instrument that has been used by other researchers before like (Justino, November 2015) in published work. The design of the scale considers reliability measure whereby a multiscale was used, and questions were asked differently to establish that the respondents understood the questions and that the responses they gave can be relied upon.

(Sürücü & Maslakçi, 2020) further states that "Validity refers to whether the measuring instrument measures the behaviour or quality it is intended to measure." For this study validity was measured by looking at data from other studies in the past which indicate which measured similar behaviour.

3.7. Limitation of study

The study is limited to Gauteng and as a result the results could potentially not be interpretable to the rest of the country, the reason for some of the limitations is because of how different Gauteng is to the rest of the country or to most of the provinces in the country. For example, Gauteng is economically different and has more access to economic opportunities as compared to a province like Limpopo which might mean that if we were to run the same study in a different province we could potentially come up with different results. Also, Gauteng a better infrastructure when compared to many of the other provinces in South Africa which could mean that access to information is much easier for people that are residing in Gauteng as compared to people who are living in other provinces within the country who have low levels of infrastructure when compared to Gauteng.

3.8. Ethical considerations

Primordial ethical norms were considered when the researcher conducted the social research (Denscombe, 2007). The researcher's behaviour regarding people, things, intellectual property, and other matters including how they interacted with their supervisor and plagiarism were all governed by ethics (Mack et al., 2005).

3.9. Conclusion

This chapter provided an overview of the research methods employed in this study. It outlined the theoretical framework for the research as well as the practical application of the methods. In the next chapter, the researcher examined different variables and other factors, influence entrepreneur's level of awareness about the common cause of start-up failures. Descriptive statistics will be presented and then followed by the data analysis and the discussion of the results in comparison to similar research.

CHAPTER 4: DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1. Introduction

The previous chapter presented the research design, the methodology, the data collection methods adopted, and sampling method used. This chapter presents data analysis techniques that were used in this study and the findings of the empirical analysis. The main objective of the chapter is to address the primary aim of the study which was to assess the determinants of IT entrepreneurs' level of awareness of the most common causes of start-ups failures in Johannesburg, South Africa. This chapter also aims to addresses the following main objectives of the study:

- To assess the determinants of IT entrepreneurs' level of awareness of the most common causes of start-ups failures in Johannesburg, South Africa.
- To evaluate the factors that contributes towards the willingness to consume information related to start-up failures among IT start-up owners in Johannesburg, South Africa.
- To explore the factors that determine accessibility to information on the most common causes of start-up failures among IT start-up owners in Johannesburg, South Africa.

The researcher targeted 100 participants, but only 70 responses were obtained. This translates to a response rate of 70%. Statistical Package for Social Sciences (SPSS) was used for statistical analysis. Using SPSS, this chapter presents basic descriptive statistics first where demographic information will be presented. This will be followed by the graphical presentation of findings on the impact of regional and economic factors, managerial competencies, and financial factors on IT start-up failures in Johannesburg. Results on how accessibility to information on the most common causes of start-up failures impacts IT start-up failure was also presented together with results on the willingness of entrepreneurs to consume information related to start-up failures.

4.2. Demographic IT entrepreneurs

This section presents the demographic information of the participants that took part in this study.

4.2.1. Gender

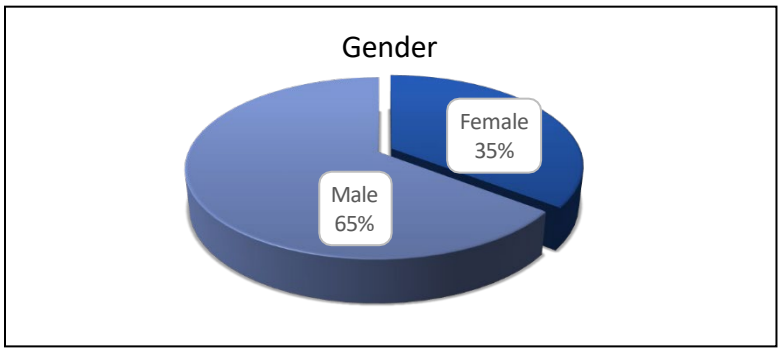

Figure 1: Gender of the participants

The results presented in figure 1 show that most of the participants that participated in this study identified themselves as male (65%) while only 35% identified themselves as female. These results indicate that there is a considerable gap in terms of gender when it comes to IT entrepreneurs in Johannesburg. This suggest that there are more males that are involved in entrepreneurial initiatives than females in the IT sector in Johannesburg. These findings are in line with (Cochran, 2019) who also found that men are more likely to open and own small entrepreneurial businesses compared to their female counterparts.

4.2.2. Age

Table 2 presents the age of the participants who took part in this study. Age was categorised into age groups of the participants.

Age group	**Percentage**
Less than 25	5.6%
25 – 35	28.7%
35 – 45	48.1%
45 – 55	13.3%

More than 55	4.3%

Table 2 Age group of the participants

The most represented age group was the 35 years to 45 years contributing 48%. This was followed by the age group 25 years to 35 years which represented 28.7% of the sample. Participants in the age group 45 years to 55 years represented 13.3% of the sample, while those with less than 25 years constituted 5.6% of the sample. Participants with more than 55 years were the least represented age group. These results suggest that most entrepreneurs in this study were within the age 25 to 45 years old. The youths (less than 25 years) were only 5.6% of the sample which is line with results from (Zhao et al, 2021) who found that the youths are sometimes discouraged from becoming entrepreneurs because of lack guidance, lack of funding and poor government support.

4.2.3. Education level

The education level of the participants who took part in this study is presented in figure 2.

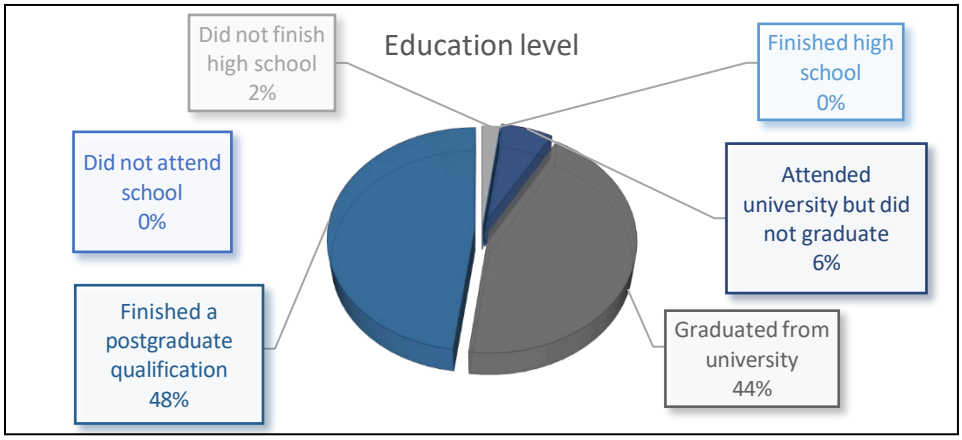

Figure 2 Education Level

Most of the participants in this study indicated that they had completed a postgraduate qualification (48%). This was followed by 44% who indicated that they had graduated from a university. Those who attended university but did not graduate represented 6% of the sample. Only 2% indicated that they did not finish high school. No participants indicated that they did not attend school. These findings suggest that almost all the participants in this study at least attended high school. In fact, the majority (48% + 44%) were at least graduates. (Nguyen et al, 2021) postulated that education increases entrepreneurial intentions and propensity to start-up initiatives.

4.2.4. Short courses attended

Short courses have the potential to contribute towards start-up success, particularly business-related short courses (Nguyen et al., 2021). Participants in this study were asked to indicate the short courses they had attended. Most of the respondents (79.6%) stated that they had attended short courses on business management. Those who indicate that they had attended financial accounting short courses represented 45.5% of the total number of participants who took part in this study. This was followed by 36.4% who indicated that they had attended short courses on marketing techniques. 27.3% indicated that they attended short courses on human resources management.

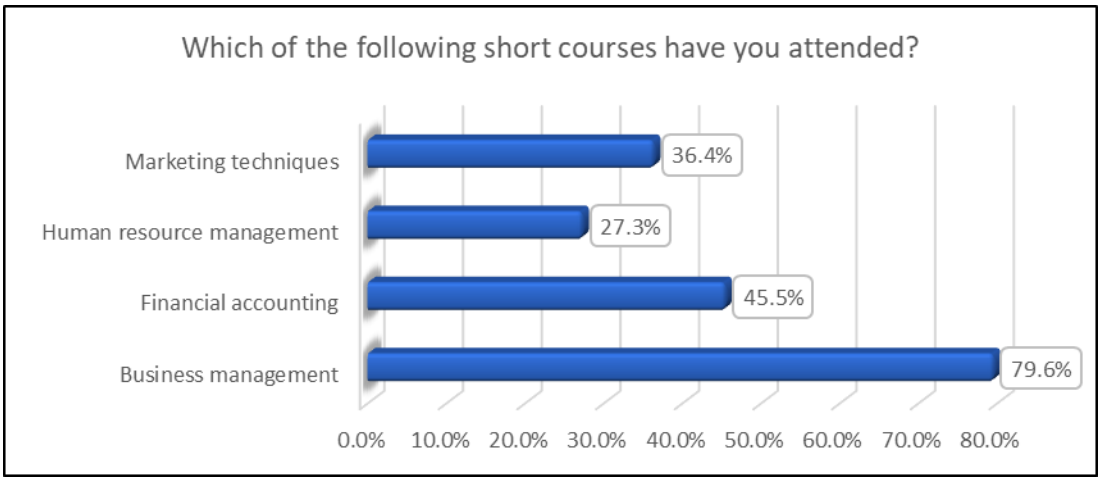

Figure 3 Education

4.3. Business Profile

This section focuses on some of the characteristics of the entrepreneurial IT start-up businesses in Johannesburg.

4.3.1. Availability of entrepreneur mentor or role model

Access to a successful business individual as a mentor has the potential to inspire start-up entrepreneurs. The successful business individual can also act as a role model and can help start-up entrepreneurs to set standards in terms of successfully running their businesses. Successful business individual offer experience and business knowledge that can be shared with start-up entrepreneurs (Arezou Abbasianchavari, 2019) Figure 4 show results on whether participants had access to a successful businessperson as a mentor or role model.

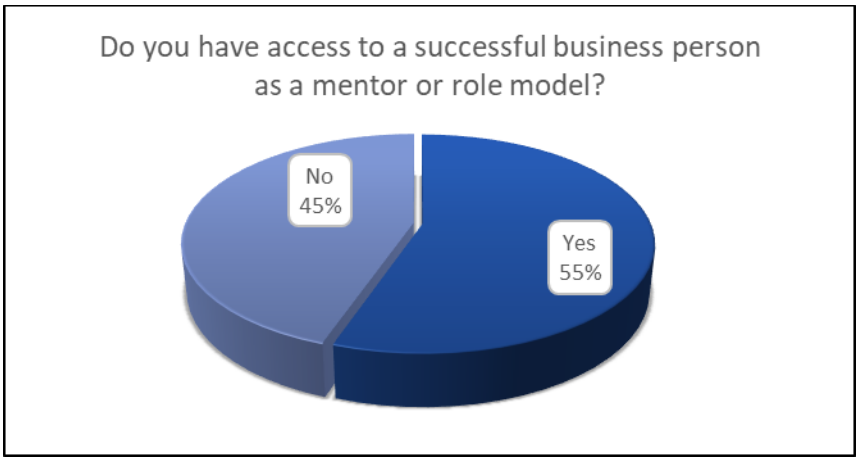

Figure 4 Availability of entrepreneur mentor or role model

Results in figure 4 show that 55% of the participant in this study specified that they had access to a successful businessperson as a mentor or role model. These results suggest that most of the participants have access to an entrepreneur mentor or role model. However, it is important to note that a significant number of participants 45% (almost half of the sample) did not have the benefit of access to an entrepreneur mentor or role model.

4.3.2. Business plan

Participants in this study were asked to indicate if their businesses had a business plan or not. The results are presented in figure 5.

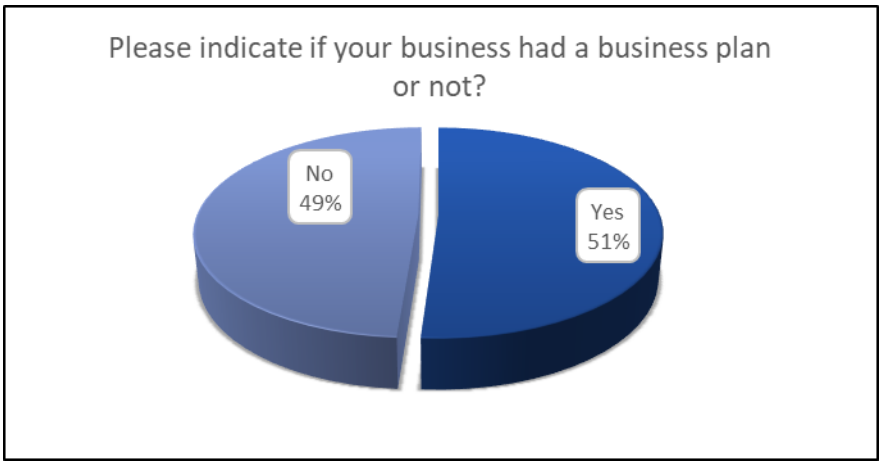

Figure 5 Availability of a business plan

The results show that 51% of all the participants who took part in this study indicated that their businesses had a business plan. On the other hand, 49% indicated that their businesses did not have

a business plan. These results indicate that even though most of the participants had business plans (51%), almost half of the participants did not have business plans. This is concerning considering that the lack of a business plan can lead to failure of entrepreneur business start-ups according to (David McKenzie, 2019). According to (Ferreras-Garcia et al, 2019), not having a business plan can obscure the entrepreneur from clearly seeing all the facets of the business.

4.4. The impact of managerial competencies on IT start-up failures in Johannesburg.

This section focuses on the impact of managerial competencies on IT start-up failures in Johannesburg.

4.4.1. Uncontrolled expenditure

The results on the effect of uncontrolled expenditure on start-up failures is presented in figure 6.

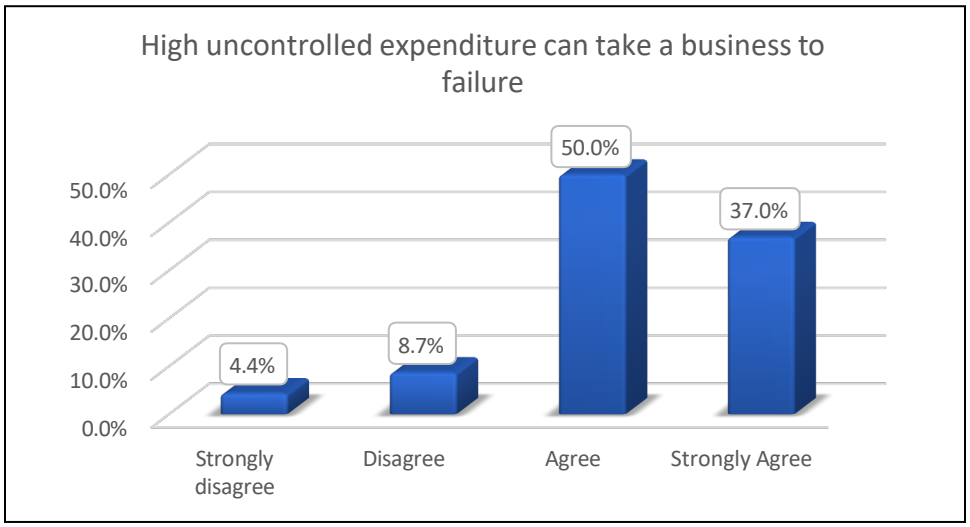

Figure 6 Uncontrolled expenditure

Results concerning the effect of uncontrolled expenditure on start-up failures showed that most of the participants in this study agreed that high uncontrolled expenditure can take a business to failure. This was informed by a total of 87% (50% + 37%) who agreed with the notion. Only a total of 13% (4.4% + 8.7%) of the participants disagreed or strongly disagreed that high uncontrolled expenditure can take a business to failure. (Akoto, 2022) also found that high uncontrolled expenditure can contribute to start-up failures.

4.4.2. Non-payment of lenders' interest

Participants were also asked to express their views on the effect of non-payment of lenders' interest on business failure. Results are presented in figure 7 below.

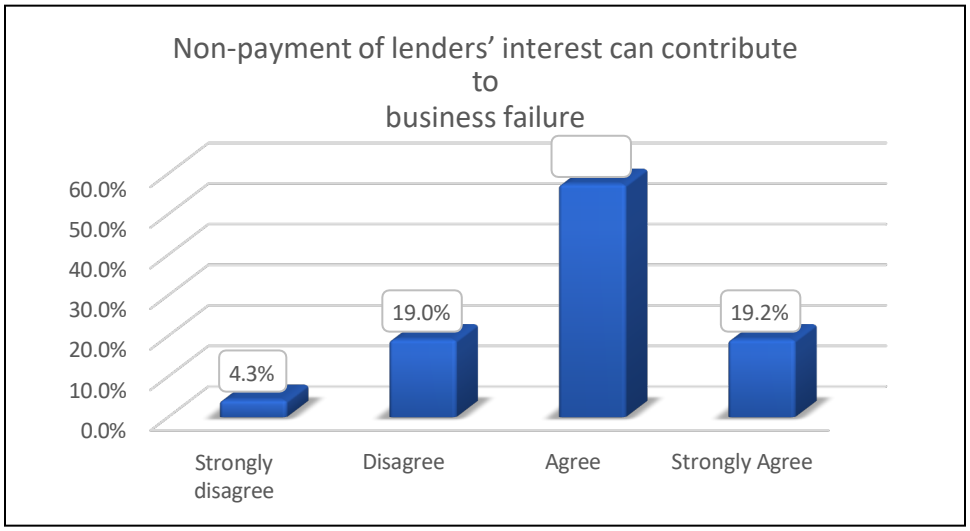

Figure 7 Non-payment of lenders' interest

Results in figure 7 show that a total of 76.7% (57.5% + 19.2%) of the participants agreed and strongly agreed with the view that non-payment of lenders' interest can contribute to business failure. Only a total of 23.3% (19.0% + 4.3%) disagreed and strongly disagreed with the view that non-payment of lenders' interest can contribute to business failure. According to (Ogunsanwo, 2020) failure to pay lenders' interest is sign that a business is in trouble and usually leads to business failure.

4.4.3. Delaying the conversion of goods to cash

The results on the impact of not quickly converting goods to cash on start-up failures is presented in figure 8.

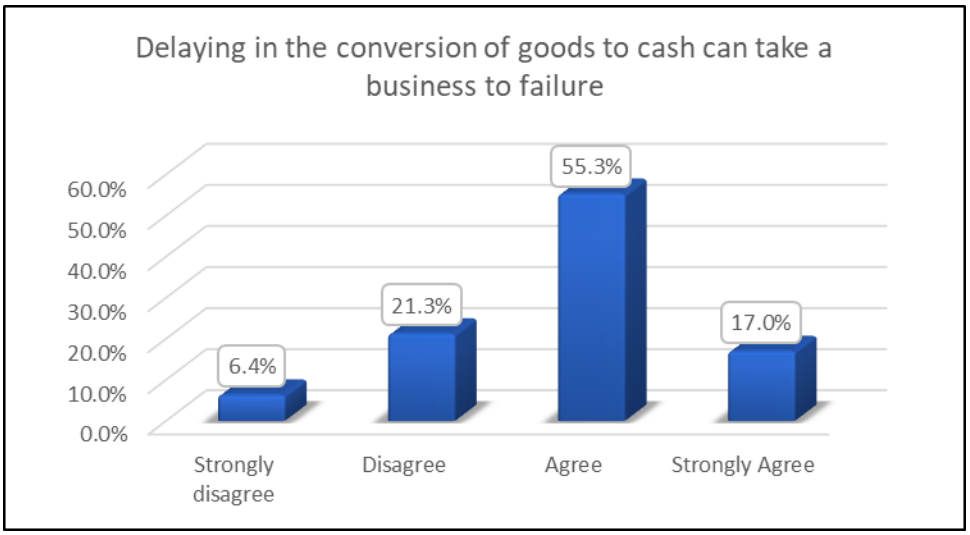

Figure 8 Delaying the conversion of goods to cash

The results in figure 8 indicate that most of the participants in this study 72.3% (55.3% + 17.0%) agreed or strongly agreed with the statement that delaying in the conversion of goods to cash can take a business to failure. Only 27.7% (21.3% + 6.4%) disagreed and strongly disagreed with the statement. These results are resonated by (Alvarado Valenzuela et al, 2020) who postulated that in some instances entrepreneurs take too long to convert goods to cash leading to liquidity problem ultimately resulting in start-up failures.

4.4.4. Non-payment of taxes

The results on the effect of non-payment of taxes on start-up failures is presented in figure 9.

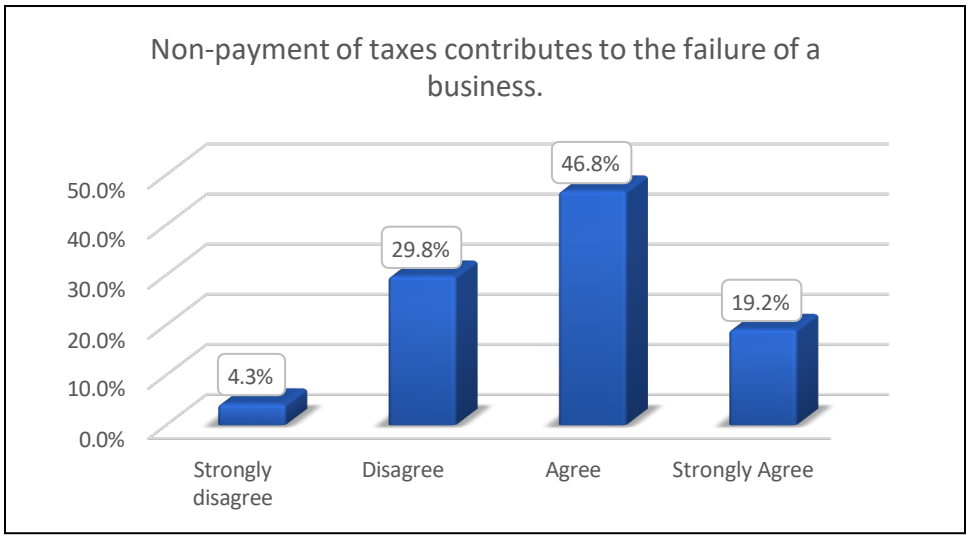

Figure 9 Non-payment of taxes

Results concerning the effect of non-payment of taxes on start-up failures showed that most of the participants in this study agreed that non-payment of taxes contributes to the failure of a business. This was informed by a total of 87% (50% + 37%) who agreed with the notion. Only a total of 13% (4.4% + 8.7%) of the participants disagreed or strongly disagreed that non-payment of taxes contributes to the failure of a business. In support of these results (Aribaba, 2019) also found that non-payment of taxes can results hefty financial penalties from the authorities which may collapse the business.

4.4.5. Insufficient domain of leadership skills

Figure 10 represents the results on the impact of insufficient domain of leadership skills on start- up failures.

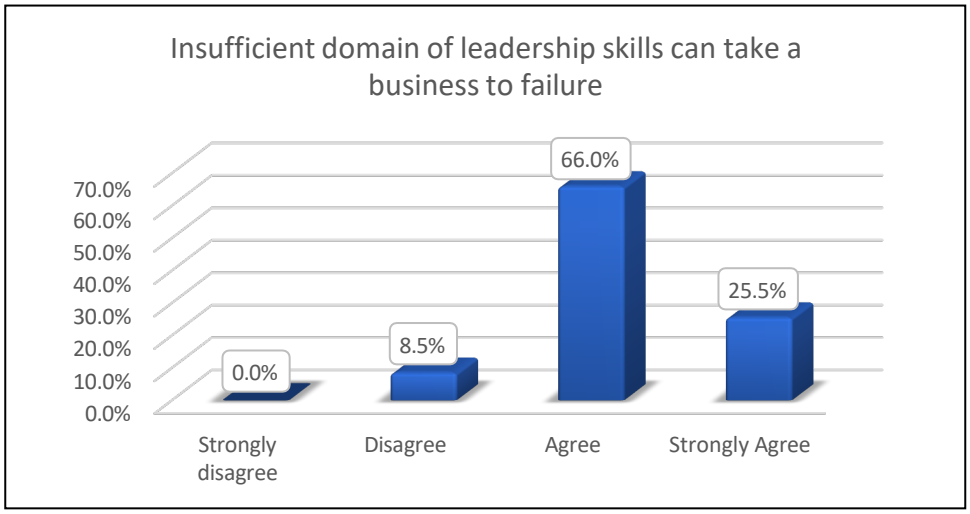

Figure 10 Insufficient domain of leadership skills

Results in Figure 10 indicated that a total of 91.5% (66.0% + 25.5%) agreed and strongly agreed that insufficient domain of leadership skills can take a business to failure. Only a total of 8.5% (8.5% + 0.0%) disagreed and strongly disagreed that insufficient domain of leadership skills can take a business to failure. These results suggest that most of the participants acknowledge that insufficient domain of leadership skills can take a business to failure. In the same vein, (Bushe, 2019) also suggested that a lack of leadership skills has been widely cited as one of the primary causes of business failure among start-ups.

4.4.6. Absence of financial planning

Figure 11 displays the results concerning the absence of financial planning and its effect on start- up failures.

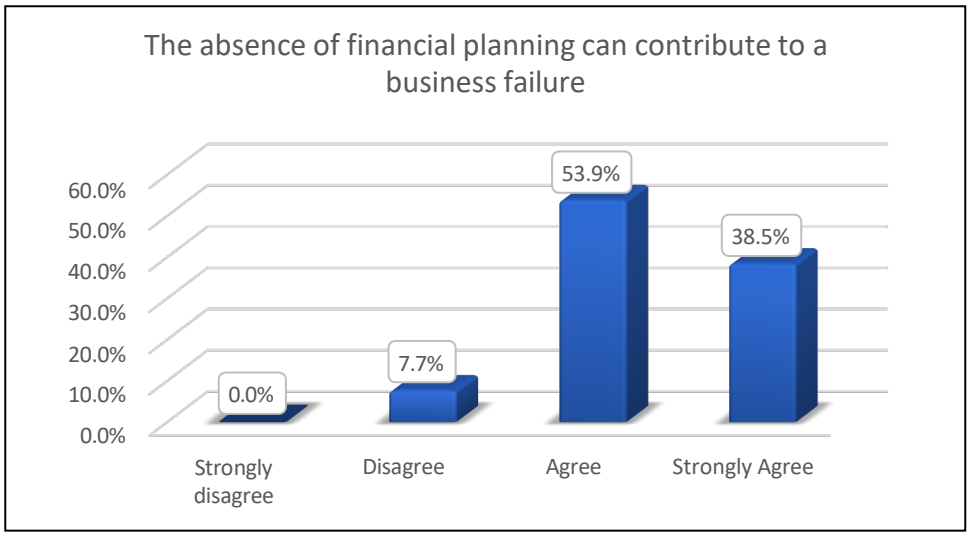

Figure 11 The absence of financial planning

Results concerning the effect of the absence of financial planning on start-up failures showed that most of the participants in this study agreed that the absence of financial planning can contribute to a business failure. This was informed by a total of 92.4% (53.9% + 38.5%) who agreed with the notion. Only a total of 7.7% of the participants disagreed or strongly disagreed that the absence of financial planning can contribute to a business failure. (Mayr et al, 2021) also found that absence of financial planning can contribute to start-up failures.

4.5. The impact of regional and economic factors on IT start-up failures in Johannesburg.

This section focuses on the impact of regional and economic factors on IT start-up failures in Johannesburg**.**

4.5.1. The absence of agencies and schools to support knowledge and skills development

Figure 12 shows the results regarding the absence of agencies and schools to support with equipping entrepreneurs with the necessary development and its potential effect on start-up failures in Johannesburg.

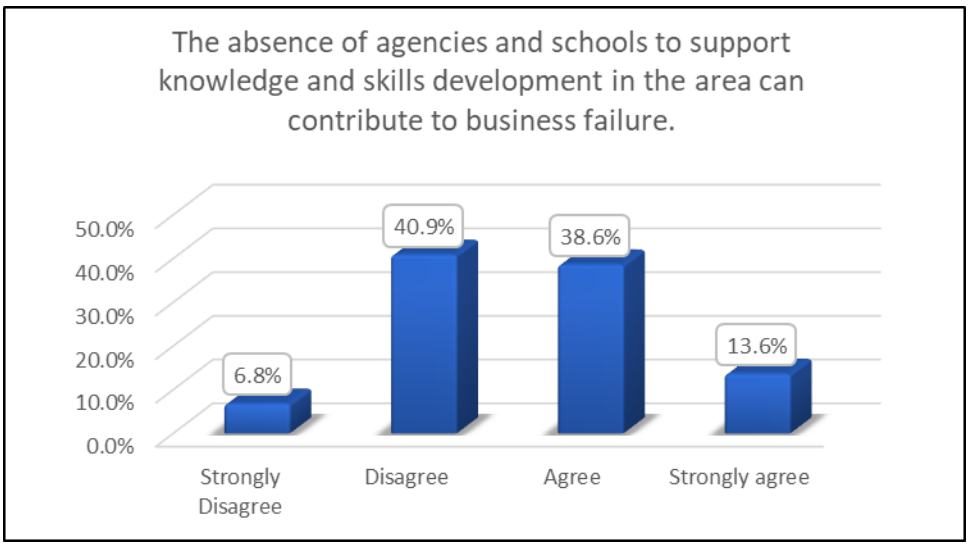

Figure 12 The absence of agencies and schools to support in knowledge and skills development

Results in Figure 12 indicated that a total of 52.2% (38.6% + 13.6%) agreed and strongly agreed with the question posed by the survey. On the other hand, a total of 47.7% (40.9% + 6.8%) disagreed and strongly disagreed with the question posed by the survey. These results suggest that most of the participants acknowledge that the absence of agencies and schools to support knowledge and skills development contributes to start-up failures. According to (Klimas et al, 2021) the lack of skills development initiatives to support business start-ups and aspiring entrepreneurs has negative consequences on the overall success rate of start-ups.

4.5.2. Inadequate supplying of water and electricity

Figure 13 shows participants responses to the statements on inadequate supplying of water and electricity and its contribution to business failure

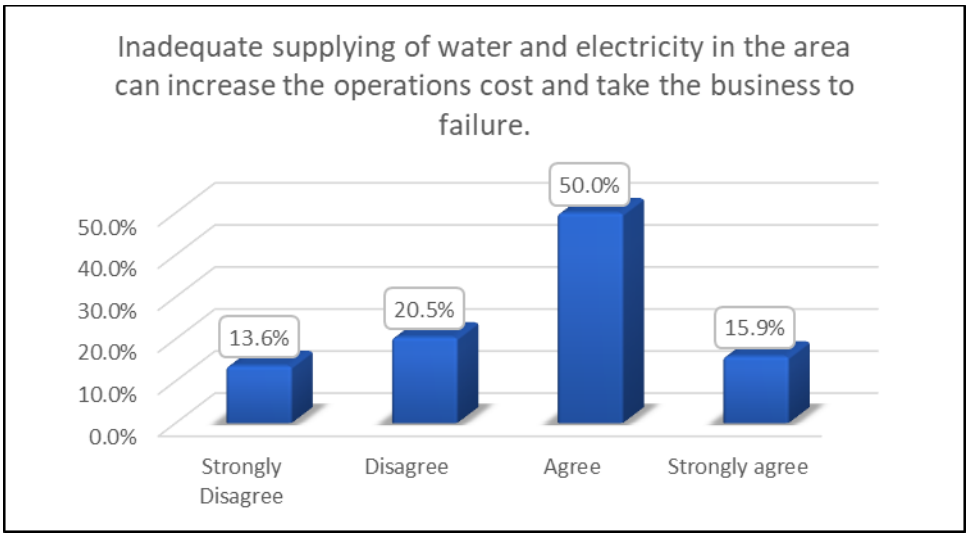

Figure 13 Inadequate supplying of water and electricity

Results in Figure 13 indicate that a total of 65.9% (50% + 15.9%) agreed and strongly agreed with the survey that inadequate supplying of water and electricity in the area can increase the operations cost and take the business to failure. On the other hand, a total of 34.1% (20.5% + 13.6%) disagreed and strongly disagreed. These results suggest that most of the participants acknowledge that inadequate supplying of water and electricity increases operations cost and can contribute to business failure. Echoing the same sentiments (Bushe, 2019) also suggested that unreliable supply of electricity and water has seriously implications on the business operating costs and can leading to business failure.

4.5.3. Insufficient investment in ICT infrastructure

Figure 4.28 presents results concerning insufficient investment in ICT infrastructure and its potential contribution to business failure.

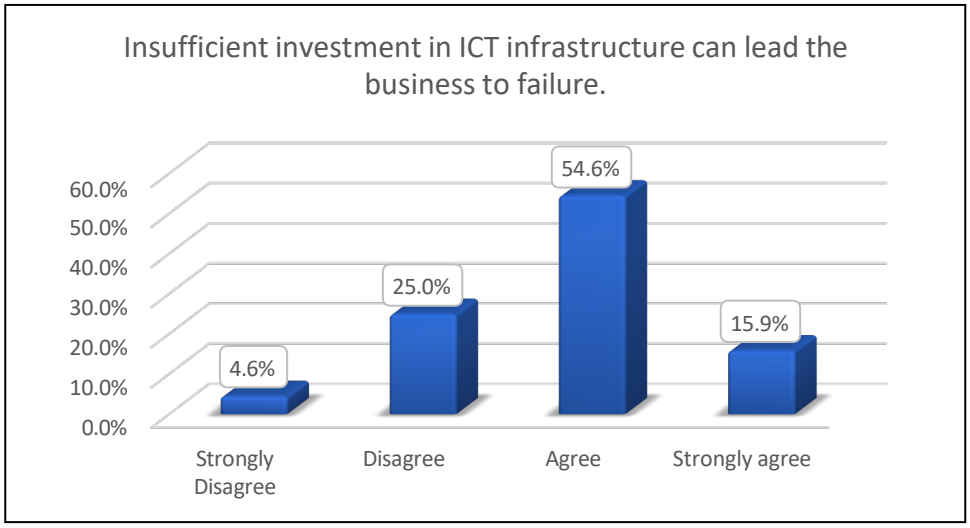

Figure 14 Insufficient investment in ICT infrastructure

Results in Figure 14 indicated that a total of 70.5% (54.6% + 15.9%) agreed and strongly agreed that insufficient investment in ICT infrastructure can lead the business to failure. On the other hand, a total of 29.6% (25% + 4.6%) disagreed and strongly disagreed that insufficient investment in ICT infrastructure can lead the business to failure. These results suggest that most of the participants acknowledge that lack of investment in ICT infrastructure can lead to start-up failures. In support of these results, (Philipp Schade, 2022) also highlighted the role of the government in investment in ICT infrastructure to support entrepreneurs to enable them to succeed.

4.5.4. Inadequate infrastructure

Figure 15 presents results concerning inadequate infrastructure and its potential contribution to business failure.

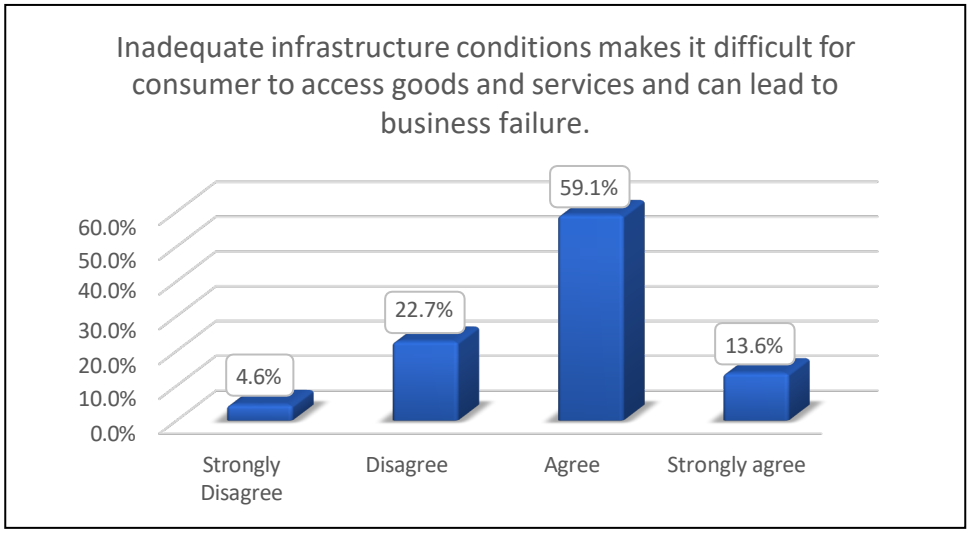

Figure 15 Inadequate infrastructure

Results in figure 15 show that 72.7% (59.1% + 13.6%) agreed and strongly agreed with the view that inadequate infrastructure conditions where the business is located makes it difficult for consumer to access goods and services and can lead to business failure. Only 27.3% (22.7% + 4.6%) disagreed and strongly disagreed with the view. According to (Abisuga-Oyekunle, 2021) one of the leading causes of start-up failures is the lack of adequate infrastructure for entrepreneur to flourish.

4.6. Contribution of financial factors to IT start-up failures in Johannesburg.

This section looks at the impact of financial factors on IT start-up failures in Johannesburg**.**

4.6.1. Insufficient financial accounting skills

The results on the effect of Insufficient financial accounting skills on start-up failures is presented in figure 16.

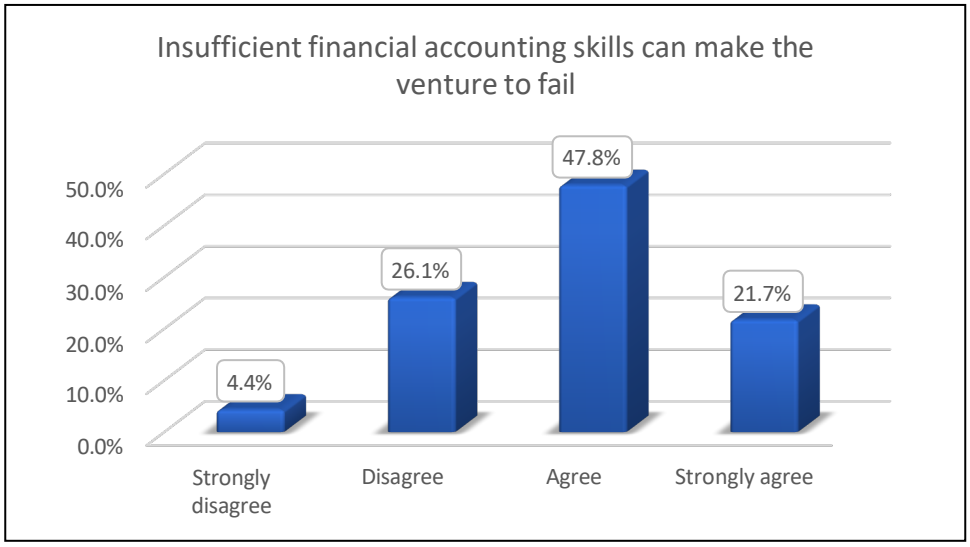

Figure 16 Insufficient financial accounting skills

Results concerning the effect of insufficient financial accounting skills on start-up failures showed that most of the participants in this study agreed that insufficient financial accounting skills can make the venture to fail. This was informed by a total of 69.5% (47.8% + 21.7%) who agreed with the notion. Only a total of 30.5% (26.1% + 4.4%) of the participants disagreed or strongly disagreed that insufficient financial accounting skills can make the venture to fail. (Fatoki, 2018) also found that Insufficient financial accounting skills can contribute to start-up failures.

4.6.2. Absence of financial records

Figure 17 represents the results on the impact of the absence of financial records on start-up failures

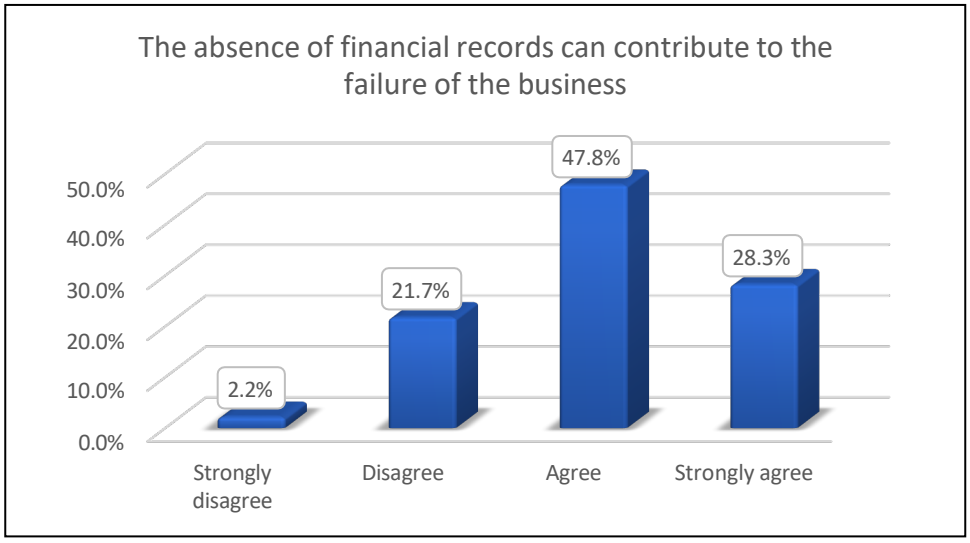

Figure 17 Absence of financial records

Results in Figure 17 indicate that a total of 76.1% (47.8% + 28.3%) agreed and strongly agreed that the absence of financial records can contribute to the failure of the business. On the other hand, a total of 23.9% (21.7% + 2.2%) disagreed and strongly disagreed with the impact of lack of financial statements. These results suggest that most of the participants acknowledge that the absence of financial records can contribute to the failure of the business. In the same vein, (Fatoki, 2018) also stated that poor management of financial records can result in business failure.

4.6.3. Lack of capital for cash flow on start-up stage

The results on the effect of the lack of capital for cash flow on start-up stage on start-up failures is presented in figure 18.

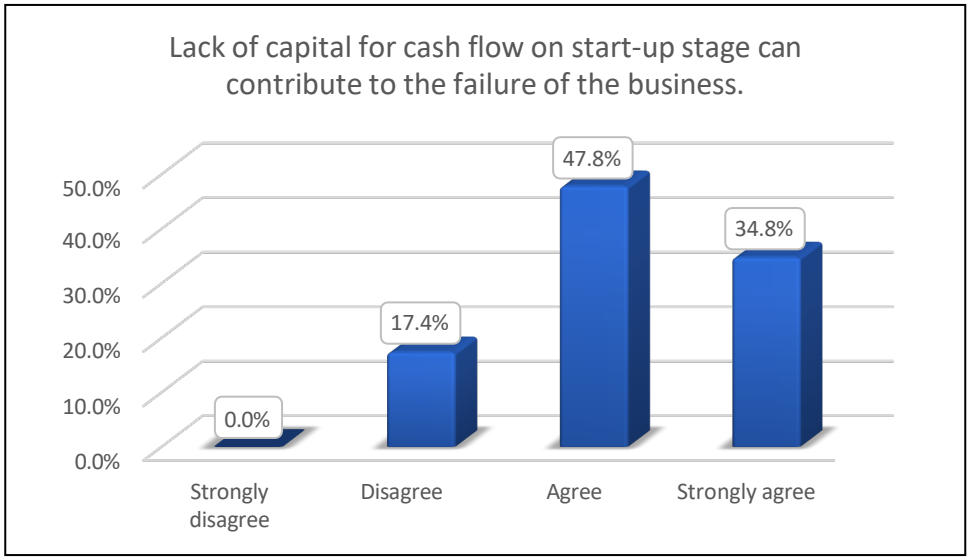

Figure 18 Lack of capital for cash flow on start-up stage

Results in Figure 18 indicated that a total of 82.6% (47.8% + 34.8%) agreed and strongly agreed that lack of capital for cash flow on start-up stage can contribute to the failure of the business. On the other hand, a total of 17.4% (17.4% + 0.0%) disagreed and strongly disagreed that lack of capital for cash flow on start-up stage can contribute to the failure of the business. These results suggest that most of the participants acknowledge that the lack of capital for cash flow on start-up stage contributes to start-up failures. These results are in line with (Martin Eling, 2018) who also suggested that the lack of capital for cash flow on start-up stage is a significant contributor to the failure of business entrepreneurial initiatives.

4.6.4. Delays in collecting debts from customers

Figure 19 represents the results on the impact of delays in collecting debts from customers on start-up failures

Figure 19 Delays in collecting debts from customers

Results concerning the delays in collecting debts from customers on start-up failures showed that most of the participants in this study agreed that delays in collecting debts from customers can contribute to business failure. This was informed by a total of 82.6% (52.2% + 30.4%) who agreed with the notion. Only a total of 17.4% (6.5% + 10.9%) of the participants disagreed or strongly disagreed. (Offei et al, 2019) also found that delays in collecting debts from customers can cause serious cashflow problem which can contribute to start-up failures.

4.7. Impact of accessibility to information

This section evaluates how accessibility to information on the common causes of start-up failures impacts IT start-up failure in Johannesburg, South Africa.

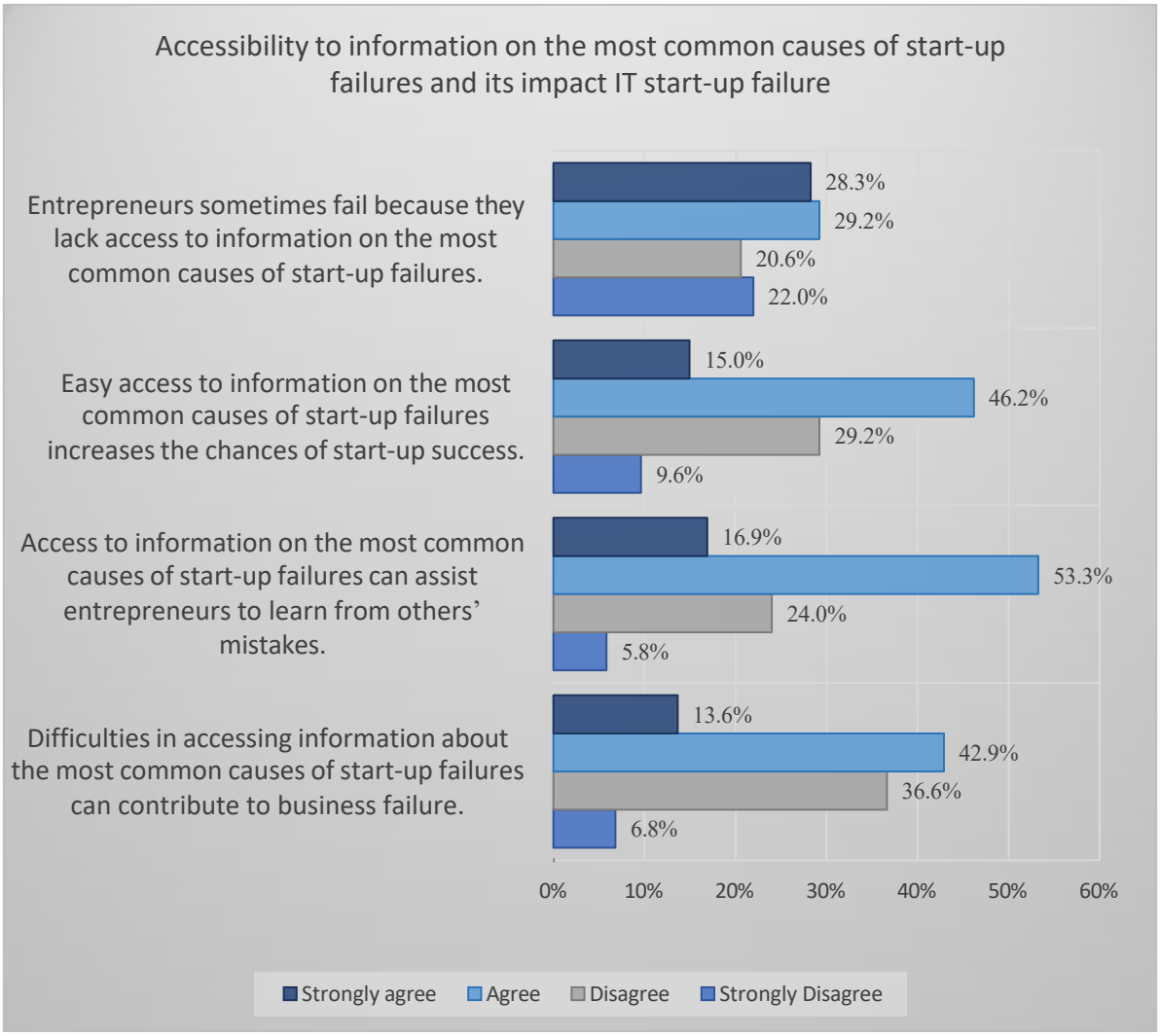

Figure 20 Accessibility to information on the most common causes of start-up failures and its impact IT start-up failure

Figure 20 shows that when participants were asked to respond to the statement 'Entrepreneurs sometimes fail because they lack access to information on the most common causes of start-up failures', a total of 57.5% (28.3% + 29.2%) agreed with the notion. However, a total of 42.6% (20.6% + 22%) of the participants disagreed that entrepreneurs sometimes fail due to a lack access to information on the most common causes of start-up failures. Information on start-up failures cab be difficult to access which can contribute towards business failure (Mayr et al.,2021).

When participants were asked if easy access to information on the most common causes of start-up failures increases the chances of start-up success, the majority 61.2% (15% + 46.2%) agreed. On the other hand, a total of 38.8% (29.2% + 9.6%) disagreed that easy access to information on

the most common causes of start-up failures increases the chances of start-up success. According to (Lee et al, 2021) the availability of information on failed businesses can enhance the chances of start-up success, where aspiring entrepreneurs use that information to come up with better plans for businesses.

Participants were also asked if access to information on the most common causes of start-up failures can assist entrepreneurs to learn from others' mistakes. The mainstream 70.2% (16.9% + 53.3%) agreed that indeed access to information on the most common causes of start-up failures can assist entrepreneurs to learn from others' mistakes. A total of 29.8% (24% + 5.8%) disagreed with the notion. (Amankwah-Amoah et al, 2022) are of the opinion that the availability of information on the reasons of start-up failures can have a significant impact in ensuring that entrepreneurs learn from others' mistakes. This, they claim will ensure that entrepreneurs avoid repeating the same errors that others have made before.

Figure 20 also shows that when participants were asked for their opinion on whether difficulties in accessing information on the common causes of start-up failures can contribute to business failure, a total of 56.5% (13.6% + 42.9%) agreed with the notion. However, a total of 43.4% (36.6% + 6.8%) of the participants disagreed that difficulties in accessing information on the common causes of start-up failures can contribute to business failure. (Mayr et al, 2021) also suggested that because failed entrepreneurs hardly want to talk about their failures, information on failed start-ups is very scarce. Such scenarios contribute to start-up failures where entrepreneurs cannot access information on the most common causes of start-up failures.

4.8. Willingness to consume information

This section looks at the willingness of the entrepreneur to consume information related to start-up failures.

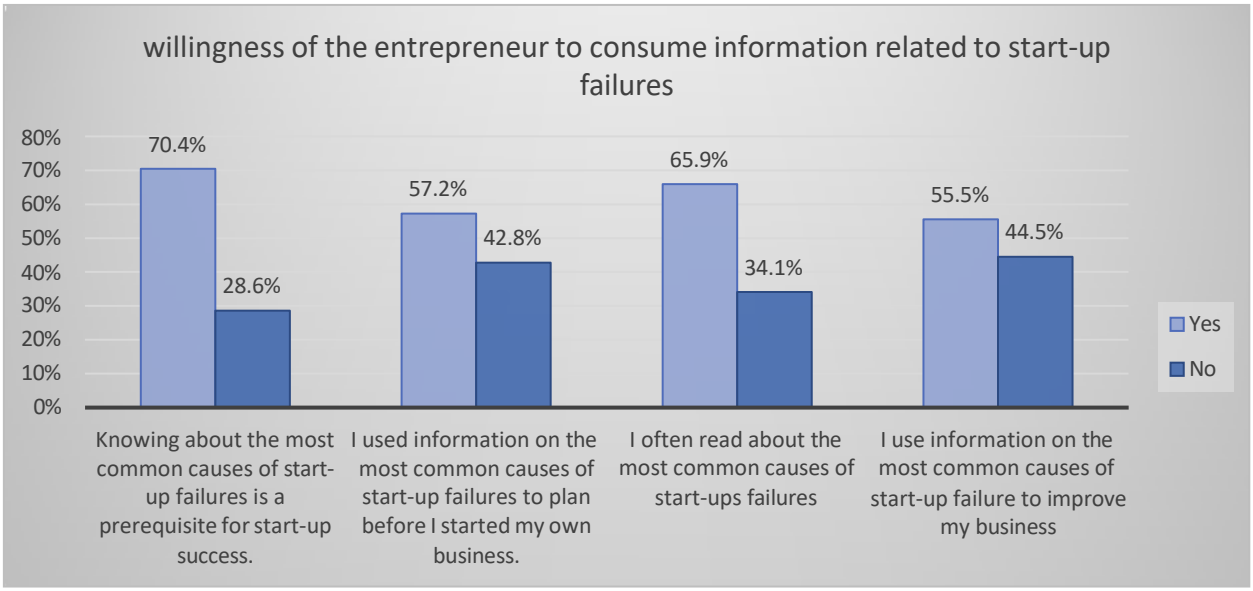

Figure 21 Willingness of the entrepreneur to consume information related to start-up failures

Figure 21 shows that participants were asked to express their sentiments on whether knowing about the most common causes of start-up failures is a prerequisite for start-up success. The majority (70.4%) agreed with the sentiment, while 28.6% disagreed. These results imply that most of the participants believe that knowledge on the main causes of start-up failures is important and can contribute to start-up success.

When participants were asked if they used information on the most common causes of start-up failures to plan before starting their own business, most of them (57.2%) acknowledged. However, a significant number (42.8%) indicated that they did not use information on the most common causes of start-up failures to plan before starting their own business. These results might be explained by the unavailability of information on the most common causes of start-up failures.

Regarding the question on whether participants often read about the most common causes of start-ups failures, 65.9% indicated that they do read about the most common causes of start-ups failures. Only 34.1% said they do not often read about the most common causes of start-ups failures. These results can also be explained by the scarcity of information on the most common causes of start-ups failures.

Concerning the use of information on the most common causes of start-up failure to improve one's business, it was almost a split with the majority (55.5%) of the participant indicating that they use information on the most common causes of start-up failure to improve their business. On the other

hand, 44.5% disagreed that they use information on the most common causes of start-up failure to improve their business.

4.9. IT entrepreneurs' level of awareness

Determinants of IT entrepreneurs' level of awareness of the most common causes of start-ups failures in Johannesburg, South Africa

Logistic regression model was used to assess the determinants of IT entrepreneurs' awareness of the most common causes of start-ups failures in Johannesburg, South Africa. Awareness of the most common causes of start-ups failures was used as the dependent variable. Age, gender, educational level, courses attended, business location, number of employees, availability of entrepreneur mentor or role model, business plan were explanatory or independent variables.

Table 3 Logistic regression model (awareness of the most common causes of start-ups failures)

Variable	**Odds ratios**	**Standard error**	**p-value**
Age			
Less than 25	1		
25 – 35	0.78	0.21	0.25
35 – 45	1.60	0.12	0.03
45 – 55	1.86	0.18	0.00
More than 55	1.90	0.34	0.00
Gender			
Male	1		
Female	0.68	0.85	0.00
Educational level			
Did not finish high school	1		
Finished high school	-	-	-
Attended university but did not graduate	1.49	0.44	0.03
Graduated from university	1.64	0.20	0.01
Finished a postgraduate qualification	1.71	0.64	0.04

Courses attended			
Business management	1		
Financial accounting	1.77	0.30	1.01
Human resource management	0.53	0.04	0.80
Marketing techniques	1.84	0.11	0.73
Number of employees			
1 to 10	1		
11 to 50	1.33	0.12	0.66
51 to 100	-	-	-
101 to 250	1.42	0.55	0.00
Access to a successful businessperson as a mentor or role model			
Yes	1		
No	0.18	0.55	0.02
Business plan			
Yes	1		
No	0.21	0.55	0.00

In a regression model predicting awareness of the most common causes of start-ups failures, results showed that entrepreneurs in the age group 55 years or more were 90% more likely than entrepreneurs in the age group less than 25 years to be aware of the most common causes of start-ups failures. This was followed by age group 45-55 years who were 86% more likely than entrepreneurs in the age group less than 25 years to be aware of the most common causes of start-ups failures. Entrepreneurs in the age group 35-45 years were 60% more likely than entrepreneurs in the age group less than 25 years to be aware of the most common causes of start-ups failures. There was no significant difference in awareness of the most common causes of start-ups failures between entrepreneurs in the age group 25-35 and entrepreneurs in the age group less than 25 years.

Results from the logistic regression model also indicated that female entrepreneurs were 32% less likely than male entrepreneurs to be aware of the most common causes of start-ups failures.

Concerning education level, results revealed that entrepreneurs with postgraduate qualifications were 71% more likely than entrepreneurs who did not finish high school to be aware of the most common causes of start-ups failures. Entrepreneurs who graduated from university were 64% more likely than entrepreneurs who did not finish high school to be aware of the most common causes of start-ups failures. Entrepreneurs who attended university and did not graduate were 49% more likely than entrepreneurs who did not finish high school to be aware of the most common causes of start-ups failures.

Focusing on courses attended, results from the logistic regression analysis indicated that there was no significant difference in awareness of the most common causes of start-ups failures between entrepreneurs who attended business management course, financial accounting course, human resource management course, or marketing techniques course.

Entrepreneurs with no access to a successful businessperson as a mentor or role model were 82% less likely than entrepreneurs with access to a successful businessperson as a mentor or role model to be aware of the most common causes of start-ups failures.

Entrepreneurs with no business plan were 79% less likely than entrepreneurs with a business plan to be aware of the most common causes of start-ups failures.

Table 4 Logistic regression model

Variable	**Odds ratios**	**Standard error**	**p-value**
Age			
Less than 25	1		
25 – 35	1.86	0.46	1.90
35 – 45	0.89	0.76	0.01
45 – 55	0.34	0.58	0.00
More than 55	0.21	0.55	0.00
Gender			

Male	1		
Female	0.61	0.46	0.60
Educational level			
Did not finish high school	1		
Finished high school	-	-	-
Attended university but did not graduate	1.57	0.02	0.02
Graduated from university	1.66	0.21	0.00
Finished a postgraduate qualification	1.61	0.30	0.00
Access to a successful businessperson as a mentor or role model			
Yes	1		
No	0.23	0.78	0.02
Business plan			
Yes	1		
No	0.35	0.11	0.00

Results from the regression model showed that entrepreneurs in the age group 55 years or more were 79% less likely than entrepreneurs in the age group less than 25 years to express willingness to consume information on the most common causes of start-ups failures in Johannesburg, South Africa.

The age group 45-55 years who were 66% less likely than entrepreneurs in the age group less than 25 years to be aware of the most common causes of start-ups failures. Entrepreneurs in the age group 35-45 years were 11% less likely than entrepreneurs in the age group less than 25 years to be aware of the most common causes of start-ups failures. There was no significant difference in willingness to consume information on the most common causes of start-ups failures between entrepreneurs in the age group 25-35 and entrepreneurs in the age group less than 25 years.

Results also indicated that female entrepreneurs were 32% less likely than male entrepreneurs to be aware of the most common causes of start-ups failures.

There was no significant difference in willingness to consume information on the most common causes of start-ups failures based on gender.

Concerning education level, results revealed that entrepreneurs with postgraduate qualifications were 61% more likely than entrepreneurs who did not finish high school to express willingness to consume information on the most common causes of start-ups failures. Entrepreneurs who graduated from university were 66% more likely than entrepreneurs who did not finish high school to express willingness to consume information on the most common causes of start-ups failures. Entrepreneurs who attended university and did not graduate were 61% more likely than entrepreneurs who did not finish high school to express willingness to consume information on the most common causes of start-ups failures.

Entrepreneurs with no access to a successful businessperson as a mentor or role model were 77% less likely than entrepreneurs with access to a successful businessperson as a mentor or role model to express willingness to consume information on the most common causes of start-ups failures.

Entrepreneurs with no business plan were 65% less likely than entrepreneurs with a business plan to express willingness to consume information on the most common causes of start-ups failures.

4.10. Accessibility to Information

Factors that determine accessibility to information on the most common causes of start-up failures among IT start-up owners in Johannesburg, South Africa.

Analysis of variance ANOVA
Table 5 Age and accessibility to information on the most common causes of start-up failures

Table 5 Age and accessibility to information on the most common causes of start-up failures

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.093	3	1.364	3.055	0.028
Within Groups	163.432	366	0.447		
Total	167.525	369			

The p-value (0.028) is less than 0.05. We reject the null hypothesis that there is no significant

difference between accessibility to information on the most common causes of start-up failures among IT start-up owners based on age and accept the alternative hypothesis that there is a significant difference between accessibility to information on the most common causes of start-up failures among IT start-up owners based on age. These results imply that accessibility to information on the most common causes of start-up failures among IT start-up owners differs among different age groups.

Table 6 Access to a successful businessperson as a mentor or role model and accessibility to information on the most common causes of start-up failures

Table 6 Access to a successful businessperson as a mentor or role model and accessibility to information on the most common causes of start-up failures

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.242	5	0.448	0.988	0.005
Within Groups	165.282	364	0.454		
Total	167.525	369			

The p-value (0.005) is less than 0.05. We reject the null hypothesis that there is no significant difference between accessibility to information on the most common causes of start-up failures among IT start-up owners based on education level and accept the alternative hypothesis that there is a significant difference between accessibility to information on the most common causes of start-up failures among IT start-up owners based on education level. These results imply that accessibility to information on the most common causes of start-up failures among IT start-up owners differs based on education level.

Chi-square test

Table 7 gender and accessibility to information on the most common causes of start-up failures

Table 7 Gender and accessibility to information on the most common causes of start-up failures

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	Sig. (2-tailed)
Equal variances assumed	0.392	0.00	-1.868	368	0.063
Equal variances not assumed			-1.855	297.686	0.065

The p-value (0.00) is greater than (0.05) therefore we reject the null hypothesis that there is no difference in accessibility to information on the most common causes of start-up failures based on gender. This indicates that there is a significant difference in accessibility to information on the most common causes of start-up failures based on gender.

Table 8 gender and accessibility to information on the most common causes of start-up failures and access to a successful businessperson as a mentor or role model

Table 8 Gender and accessibility to information on the most common causes of start-up failures and access to a successful businessperson as a mentor or role model

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	Sig. (2-tailed)
Equal variances assumed	0.392	0.00	-1.868	368	0.403
Equal variances not assumed			-1.855	297.686	0.301

The p-value (0.00) is less than 0.05. We reject the null hypothesis that there is no significant difference between accessibility to information on the most common causes of start-up failures among IT start-up owners based on access to a successful business person as a mentor or role model, and accept the alternative hypothesis that there is a significant difference between accessibility to information on the most common causes of start-up failures among IT start-up owners based on access to a successful businessperson as a mentor or role model. These results imply that accessibility to information on the most common causes of start-up failures among IT start-up owners differs based on access to a successful businessperson as a mentor or role model.

Table 9 gender and accessibility to information on the most common causes of start-up failures and availability of business plan

Table 9 gender and accessibility to information on the most common causes of start-up failures and availability of business plan

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	Sig. (2-tailed)
Equal variances assumed	0.262	0.00	-1.768	348	0.000
Equal variances not assumed			-1.755	297.686	0.001

The p-value (0.00) is less than 0.05. We reject the null hypothesis that there is no significant difference between accessibility to information on the most common causes of start-up failures

among IT start-up owners based on business plan and accept the alternative hypothesis that there is a significant difference between accessibility to information on the most common causes of start-up failures among IT start-up owners based on business plan. These results imply that accessibility to information on the most common causes of start-up failures among IT start-up owners differs based on business plan.

4.11. Hypothesis testing result

This section demonstrates how the primary aims of the study were addressed, considering the research objectives, research questions and hypothesises that were outlined in chapter 1. The primary aim of the study was to assess the determinants of IT entrepreneurs' level of awareness of the most common causes of start-ups failures in Johannesburg, South Africa. The following objectives were outlined to address the abovementioned primary aim of the study:

- To assess the determinants of IT entrepreneurs' awareness of the most common causes of start-ups failures in Johannesburg, South Africa.
- To explore the factors that determine accessibility to information on the most common causes of start-up failures among IT start-up owners in Johannesburg, South Africa.
- To evaluate the factors that contributes towards willingness to consume information related to start-up failures among IT start-up owners in Johannesburg, South Africa.

Objective 1: To assess the determinants of IT entrepreneurs' level of awareness of the most common causes of start-ups failures in Johannesburg, South Africa.

H1 - Age is a determinant of lack of awareness of causes of start-up failure among IT entrepreneurs in Johannesburg, South Africa.

Regression results produced statistically significant p-values; therefore, we accept the null hypothesis and conclude that age is a determinant of lack of awareness of causes of start-up failure among IT entrepreneurs in Gauteng. Results suggested that older entrepreneurs where more likely than younger entrepreneurs to be aware of the most common causes of start-ups failures. These results maybe be explained by the fact that older entrepreneurs have more experience and are therefore more aware of the common reasons of start-ups failures. Concerning gender, female entrepreneurs were less likely than male entrepreneurs to be aware of the most common causes of start-ups failures.

H1 - Gender is a determinant of lack of awareness of causes of start-up failure among IT entrepreneurs in Johannesburg, South Africa.

Results from the logistic regression model indicated that female entrepreneurs were less likely than male entrepreneurs to be aware of the most common causes of start-ups failures. The results were statistically significant; therefore, we accept the null hypothesis and conclude that gender is a determinant of lack of awareness of causes of start-up failure among IT entrepreneurs in Gauteng.

H1 - Education level is a determinant of lack of awareness of causes of start-up failure among IT entrepreneurs in Johannesburg, South Africa.

Entrepreneurs with more education were more likely than entrepreneurs with less education to be aware of the most common causes of start-ups failures. The results were statistically significant, and we therefore accept the null hypothesis that education level is a determinant of lack of awareness of causes of start-up failure among IT entrepreneurs in Gauteng. These results suggest that education improves awareness of the most common causes of start-ups failures.

H1 - Courses attended determine lack of awareness of causes of start-up failure among IT entrepreneurs in Johannesburg, South Africa.

Results from the logistic regression analysis indicated that there was no statistically significant difference in awareness of the most common causes of start-ups failures between entrepreneurs who attended business management course, financial accounting course, human resource management course, or marketing techniques course. We therefore reject the null hypothesis that courses attended determine lack of awareness of causes of start-up failure among IT entrepreneurs in Gauteng. And conclude that courses attended do not determine lack of awareness of causes of start-up failure among IT entrepreneurs in Gauteng.

H1 - Number of employees determine lack of awareness of causes of start-up failure among IT entrepreneurs in Johannesburg, South Africa.

Entrepreneurs with more employees were more likely than entrepreneurs with less employees to be aware of the most common causes of start-ups failures. The results means that we accept the null hypothesis that the number of employees determine lack of awareness of causes of start-up failure among IT entrepreneurs in Gauteng. This suggest that more employees may imply a successfully owned business by an entrepreneur who is aware of the most common causes of start-ups failures and has manged to avoid them.

H1 - Lack of a business mentor as a role model is one of the determinants of lack of awareness of causes of start-up failure among IT entrepreneurs in Johannesburg, South Africa.

Entrepreneurs with no access to a successful businessperson as a mentor or role model were less likely than entrepreneurs with access to a successful businessperson as a mentor or role model to be aware of the most common causes of start-ups failures. The results were statistically significant; therefore, we accept the null hypothesis that lack of a business mentor as a role model is one of the leading determinants of lack of awareness of causes of start-up failure among IT entrepreneurs in Gauteng. These findings highlight the importance of mentorship where mentors educate entrepreneurs on the most common causes of start-ups failures.

H1 - Lack of a business plan is one of the determinants of lack of awareness of causes of start-up failure among IT entrepreneurs in Johannesburg, South Africa.

Entrepreneurs with no business plan were less likely than entrepreneurs with a business plan to be aware of the most common causes of start-ups failures. The results were statistically significant and therefore we accept the null hypothesis that lack of a business plan is one of the leading determinants of lack of awareness of causes of start-up failure among IT entrepreneurs in Gauteng. These results suggest that entrepreneurs with no business plans will most probably not be aware of the most common causes of start-ups failures.

Objective 2: To explore the factors that determine accessibility to information on the most common causes of start-up failures among IT start-up owners in Johannesburg, South Africa.

H1 - There is no significant difference between accessibility to information on the most common causes of start-up failures among IT start-up owners based on age

The p-value (0.028) is less than 0.05. We reject the null hypothesis that there is no significant difference between accessibility to information on the most common causes of start-up failures among IT start-up owners based on age and accept the alternative hypothesis that there is a significant difference between accessibility to information on the most common causes of start-up failures among IT start-up owners based on age. These results imply that accessibility to information on the most common causes of start-up failures among IT start-up owners differs among different age groups.

H1-There is no difference in accessibility to information on the most common causes of start-up failures based on gender

The p-value (0.00) is greater than (0.05) therefore we reject the null hypothesis that there is no difference in accessibility to information on the most common causes of start-up failures based on gender This indicates that there is a significant difference in accessibility to information on the most common causes of start-up failures based on gender.

H1 - There is no significant difference between accessibility to information on the most common causes of start-up failures among IT start-up owners based on education level

The p-value (0.005) is less than 0.05. We reject the null hypothesis that there is no significant difference between accessibility to information on the most common causes of start-up failures among IT start-up owners based on education level and accept the alternative hypothesis that there is a significant difference between accessibility to information on the most common causes of start-up failures among IT start-up owners based on education level. These results imply that accessibility to information on the most common causes of start-up failures among IT start-up owners differs based on education level.

H1 - There is no significant difference between accessibility to information on the most common causes of start-up failures among IT start-up owners based on access to a successful businessperson as a mentor or role model

The p-value (0.00) is less than 0.05. We reject the null hypothesis that there is no significant difference between accessibility to information on the most common causes of start-up failures among IT start-up owners based on access to a successful business person as a mentor or role model, and accept the alternative hypothesis that there is a significant difference between accessibility to information on the most common causes of start-up failures among IT start-up owners based on access to a successful businessperson as a mentor or role model

H1 - There is no significant difference between accessibility to information on the most common causes of start-up failures among IT start-up owners based on business plan

The p-value (0.00) is less than 0.05. We reject the null hypothesis that there is no significant difference between accessibility to information on the most common causes of start-up failures among IT start-up owners based on the availability of a business plan and accept the alternative hypothesis that there is a significant difference between accessibility to information on the most common

causes of start-up failures among IT start-up owners based on business plan.

Objective 3: To evaluate the factors that contribute towards willingness to consume information related to start-up failures among IT start-up owners in Johannesburg, South Africa.

H1 - Age influences willingness to consume information related to start-up failures among IT start-up owners in Johannesburg, South Africa.

Regression results produced statistically significant p-values; therefore, we accept the null hypothesis and conclude that age influences willingness to consume information related to start-up failures among IT start-up owners in Johannesburg, South Africa.

H1 - Gender influences willingness to consume information related to start-up failures among IT start-up owners in Johannesburg, South Africa.

The results were not statistically significant; therefore, we reject the null hypothesis and conclude that gender does not influences willingness to consume information related to start-up failures among IT start-up owners in Johannesburg, South Africa.

H1 - Education level influences willingness to consume information related to start-up failures among IT start-up owners in Johannesburg, South Africa.

The results were statistically significant, and we therefore accept the null hypothesis that education level influences willingness to consume information related to start-up failures among IT start-up owners in Johannesburg, South Africa.

H1 - Lack of a business mentor as a role model is one of the leading determinants of lack of awareness of causes of start-up failure among IT entrepreneurs in Johannesburg, South Africa.

The results were statistically significant; therefore, we accept the null hypothesis that lack of a business mentor as a role model influences willingness to consume information related to start-

up failures among IT start-up owners in Johannesburg, South Africa.

H1 - Lack of a business plan is one of the leading determinants of lack of awareness of causes of start-up failure among IT entrepreneurs in Johannesburg, South Africa.

The results were statistically significant and therefore we accept the null hypothesis that lack of a business plan influences willingness to consume information related to start-up failures among IT start-up owners in Johannesburg, South Africa. These results suggest that entrepreneurs with no business plans are less likely willingness to consume information related to start-up failures among IT start-up owners in Johannesburg, South Africa.

4.12. Conclusion

This chapter presents data analysis techniques that were used in this study and the findings of the empirical analysis. The following chapter will discuss the results that have been presented in this chapter.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

This chapter presents the findings of the study which addressed the primary aim of assessing the determinants of IT entrepreneurs' level of awareness of the most common causes of start-ups failures in Johannesburg, South Africa. It begins by summarising the chapters in the study, then discusses and draws conclusions from the empirical results presented in Chapter 4. The chapter concludes with research conclusions, limitations, and suggestions for future studies.

5.2. Hypothesis outcomes

All hypotheses formulated to investigate the accessibility of information were rejected, indicating that in Johannesburg, where the study was conducted, information appears to be easily accessible amongst entrepreneurs in IT. Information seem accessible without necessarily adhering to the parameters set out by the hypothesis.

All hypotheses formulated to investigate the level of awareness among entrepreneurs were accepted, except for one. The accepted hypothesis confirmed that entrepreneurs gain greater insight into the potential risks of entrepreneurship through experience, education, and business planning.

All but one of the hypotheses generated to investigate the correlation between willingness to consume information and factors such as age, education level, and having a business mentor and a business plan were accepted. This implies that these factors may be indicative of openness to learning about the business realm. The rejected hypothesis concerned gender, demonstrating that there is no gender-based distinction when it comes to willingness to consume information.

5.3. Recommendations

This section provides recommendations based on the reviewed literature and the results from this study.

5.3.1. Recommendations on promoting awareness on the common causes of IT start-up failures

Awareness campaigns

common causes of IT start-ups failures, a significant portion was not aware. This calls for initiatives that are aimed at promoting awareness of the most common causes of IT start-ups failures. This can be in form of awareness campaigns to educate entrepreneurs on the most common factors that causes IT start-ups failures.

Mentorship programs

Mentorship programs can provide a platform for mentors to share their own experiences and lessons learned with the start-up entrepreneurs, which can help raise awareness about the common causes of start-up failure. They can also provide guidance and advice from other experienced entrepreneurs who have faced similar challenges and overcome them, this can help entrepreneurs to comprehend some of the most common causes of IT start-ups failures and avoid common mistakes and pitfalls. Mentors can also share their own experiences and lessons learned from failure, which can help start-up entrepreneurs to understand the most common causes of IT start-

ups failures.

Seminars and Conferences

By bringing together industry experts, business owners, investors, and other stakeholders to discuss and debate the causes of start-up failure as well as share their own experiences and lessons learned, holding seminars or conferences can be an effective way to raise awareness of the most common causes of IT start-up failures. Giving entrepreneurs a forum to share their own failures and lessons learned, can help spread knowledge of the common causes of start-up failure and how to avoid them.

Social media

Social media can be a useful tool for raising awareness of the most common causes of IT start-up failures by creating and disseminating written content (blog posts, articles, infographics, films) that offers resources and information on the reasons why start-ups fail and how to avoid them. Social media can also allow start-up entrepreneurs to interact with other entrepreneurs and industry professionals, taking part in conversations and debates regarding the reasons why start-ups fail, and sharing their own experiences and lessons learned. Social media can also enable engagements with stakeholders who are interested in learning more about the most common causes of IT start-up failures and can be used to provide educational resources like webinars, workshops, or guides on the subject.

5.3.2. Recommendations on dealing with the most common causes of IT start-up failures

Funding

This study recommends that there is a need for funding to improve the success rate of start-ups in Johannesburg. Funding plays a critical role in the success of start-ups and entrepreneurs. It allows them to finance the development of their business, including research and development, marketing, and hiring employees.

Skills development

The development of entrepreneurial skills can be crucial to the success of start-ups. Start-ups can

negotiate the difficulties of beginning and expanding a business and improve their chances of success if they possess crucial entrepreneurial skills. The development of entrepreneurial skills may be accomplished in several ways, including seminars, mentorship, educational and training programs, and real-world experience.

Tackling corruption

Starting a business and operating as an entrepreneur can suffer greatly from corruption. For start-ups and entrepreneurs, corruption in the business environment can bring a variety of difficulties and problems. This study recommends that the government and other key stakeholders come up with strategies to fight corruption.

Building business-friendly environment and infrastructure

Building business-friendly environment and infrastructure can be a key factor in the success of start-ups. A start-up's ability to succeed can be significantly influenced by the infrastructural environment that it operates in. This includes having access to reasonably priced office space, consistent energy, a skilled staff, a dependable transportation system, and a government that is supportive. Availability of a pool of skilled workers can allow start-ups to access an educated workforce, and they can deliver goods and services to clients more effectively with the aid of an efficient transportation infrastructure. Start-ups can also benefit from financial incentives and other resources from a supportive government.

Tax incentives

The success of start-ups can also be significantly influenced by tax incentives. These incentives, which may include tax credits, deductions, exemptions, and deferrals, are intended to lessen the financial burden on start-ups. Tax incentives for start-ups can lower their operating expenses and make it more practical for them to engage in development and expansion. For instance, tax deductions can be used to lower the amount of taxes owing on business income, while tax credits can be used to offset the cost of R&D. Deferrals can be used to put off paying taxes while exemptions can be used to lower or eliminate taxes on specific products or services. Tax incentives can also help attract investments and talent, which might accelerate the flow of capital and skilled workforce into the region and contribute to the development of a more dynamic start-up ecosystem.

5.4. Limitations and recommendations for future studies

It is considered prudent for researchers to realise and acknowledge the limitations of their research work and provide possible suggestions to improve future studies on the same topic. As with any research conducted, this study is not immune from limitations. This section presents the limitations of the study and provides plausible suggestions on what could be done in future to improve research on the topic under investigation.

To gain a better understanding of entrepreneurship and factors that contribute to IT start-ups failures, a mixed-methods approach could be adopted. This study relied on quantitative data that was gathered from entrepreneurs. Findings could have been enhanced by collecting qualitative data using structured or unstructured interviews to support quantitative data. This could have enhanced the findings from this study by improving robustness of the results. This emanates from the fact that advantages of mixed methods study outweigh the drawbacks of both quantitative and qualitative research. A mixed methods approach also helps the researcher to generate a more balanced and comprehensive research than either quantitative or qualitative research.

This study used a questionnaire to collect data from 70 entrepreneurs from Johannesburg.
The sample size could have been increased to include more participants. However due to financial constraints and time limitations the researcher only collected data from the above-mentioned number of entrepreneurs.

Future studies on entrepreneurship and factors that contribute to IT start-ups failures can also widen the target population to include important stakeholders such as the civic society, NGOs, trade unions and representative from the relevant government departments that deals with entrepreneurs and business start-ups. This has the potential to improve the depth of the study and improve the quality of data collected. For instance, the researcher will get rich insights from the civic society or trade unions on measures that can be implemented to promote awareness about the most common causes of IT start-ups failures.

5.5. Conclusion

This study was carried out to assess the level of entrepreneur awareness about the most common

determinants of IT start-ups failures in Johannesburg, South Africa. Through literature review and the analysis of data collected from participants in Johannesburg, this study managed to address the primary aims of the study. Findings from this study highlighted the most common determinants of IT start-ups failures in Johannesburg, South Africa. The study provided insights on whether IT start-up owners are aware of the most common causes of IT start-ups failures. The study also managed to provided findings on how accessibility to information on the most common causes of start-up failures impacts IT start-up failure in Johannesburg. Insights on the willingness of entrepreneurs to consume information related to start-up failures were also provided.

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APPENDIX A

Questionnaire (Justino, November 2015)

Section A: Demographic information

1) Age of respondent?

2) Gender of respondent?

Female	0
Male	1

3) What is your educational level?

No education	
Matric	
Undergraduate	
Postgraduate	

4) Where is the business located?

Village	
Township	
Urban Area	
Suburb	

5) Which of the following short courses have you attended? Please, mark all applicable to you.

Business management	
Financial accounting	
Human resource management	
Marketing techniques	

Other	

Section B: Business profile

6) How many employees does the business employ? Please Mark with an X.

1 to 10	
11 to 50	
51 to 100	

7) Do you have access to a successful businessperson as a mentor or role model? Please mark with an X.

Yes	
No	

8) Please indicate if your business had a business plan or not.

Yes	
No	

9) If you answered yes to the above question, to what frequency did you run the business in accordance with the business plan? Please, mark with an X.

Never	
Rarely	
Sometimes	
Often	
Always	

Section C – management situations as failure factors

10) Please, mark your agreement with an X to each of the statement below regard the managerial

causes of small business failure.

Statements	Strongly	Disagree	Agree	Strongly Agree
Being the only person running everything and work overload can take a business to failure.	4	3	2	1
Ineffective and inefficient communication with employees can take a business to failure.	4	3	2	1
Ineffective and inefficient communication with customers, suppliers, or other outside organizations can take a business to failure.	4	3	2	1
Insufficient business management experiences took the business to failure.	4	3	2	1
lack of professional advice can take a business to failure.	4	3	2	1
High price or lower price strategy can take a business to failure.	4	3	2	1
High uncontrolled expenditure can take a business to failure.	4	3	2	1
Insufficient domain of the business method can take a venture to failure	4	3	2	1
Non-payment of lenders' interest contributed can contribute to the failure of the business	4	3	2	1
Delaying in the conversion of goods to cash can take a business to failure.	4	3	2	1
Non-payment of taxes contributed to the failure of the business.	4	3	2	1
Insufficient domain of leadership skills can take a venture to failure.	4	3	2	1
The absence of marketing planning can contribute to a business failure.	4	3	2	1
The absence of financial planning can contribute to a business failure	4	3	2	1

Section D – financial situations as failure factors

11) Please, mark your agreement with an X to each of the statement below regard financial causes of small business failure.

Statements	Strongly	Disagree	Agree	Strongly

Insufficient financial accounting skills can make the venture to failure	4	3	2	1
The absence of financial records can contribute to the failure of business	4	3	2	1
Insufficient control of the business resources (finance, raw material or finished product, equipment) can contribute to the failure of a business.	4	3	2	1
Customers' failure to pay their debts contributed to less cash for operations and can take a business to failure.	4	3	2	1
Lack of capital for cash flow on start-up stage can contribute to the failure of a business.	4	3	2	1
Using a unique account for business and personal use can contribute to the failure of a business.	4	3	2	1
Delays in collecting debts from customers can contribute to business failure.	4	3	2	1

Section E - market competition as failure factors

12) Please, mark your agreement with an X to each of the statement below regard the competitive causes of small business failure.

Statements	Strongly Disagree	Disagree	Agree	Strongly Agree
Poor demand for services and goods can take a business to failure.	4	3	2	1
Many competitors selling the same services and products in the market can contribute to failure.	4	3	2	1
Lack of competitive advantage over competitors can take a business to failure.	4	3	2	1
Disregarding customer complaints can contribute to the failure of a business.	4	3	2	1
Negligence to cultivate product awareness can contribute to failure.	4	3	2	1

Theft of goods and equipment c a n contribute to the failure of the business.	4	3	2	1
Setting a lower or too expensive competitive price of goods contributed to failure.	4	3	2	1

Section F – economic conditions as failure factors

13) Please, mark your agreement with an X to each of the statement below regard the regional economic causes of small business failure.

Statements	Strongly Disagree	Disagree	Agree	Strongly Agree
The absence of agencies and schools to support in knowledge and skills development in the area c a n contribute to business failure.	4	3	2	1
The whole set of strict procedures in licensing the business in pre-start-up stage consumed all the money and can contribute to failure.	4	3	2	1
Shortage of skilled people in the area made difficult to obtain a qualified employee and c a n contribute to the failure of business.	4	3	2	1
Actions of bribery and corruption in the area c a n take a business to failure.	4	3	2	1
Inadequate supply of water and electricity in the area increased the operations cost and can take the business to failure.	4	3	2	1
Insufficient support of the economy in the investment ICT infrastructure can lead a business to failure.	4	3	2	1
Lack of financial support in the area made it difficult to raise sufficient capital and c a n contribute to the failure of business.	4	3	2	1
Inadequate infrastructure conditions where the business was located made it difficult for consumers to access goods and services.	4	3	2	1

Section G: Willingness to consume information on the causes of start-up failures.

Please, mark your agreement with an X to each of the statement about willingness to consume information about business failures.

		Yes	**No**
	Do you often read about the causes start-ups failures?		
	Are you willing to use information on start-up failure to improve your business?		